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F ROSE ANNUAL

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Notices to Members for 1917.

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Subscriptions of New Members. Those members who joined the Society on or after July 1st, 1916, and have already paid a subscription, are exempt from further payment until January 1st, 1918.

New Members of the current year. Subscriptions paid by new members on or after July 6th next entitle to all the publications and other privileges of membership until January 1st, 1919.

Resignations. Any member wishing to resign must give notice to the Hon. Secretaries on or before February 1st, after which date he will remain liable for his subscription.

The Exhibitions. Two Shows will be held. The Metropolitan Exhibition will take place in the Royal Botanic Gardens, Regent's Park, on Friday, July 6th; and the Autumn Rose Show, in the Royal Horticultural Hall, Vincent Square, Westminster, on Tuesday, September 18th.

Extra Tickets. Members can purchase extra Tickets for their friends for the Royal Botanic Show at a reduced rate on application being made to the Hon. Secretary, 25, Victoria Street, S.W., on or before June 30th.

Extra Copies of Publications. Members can purchase extra copies, post free, of the "Select List of Roses and Instructions for Pruning," price 5s.; the "Enemies of the Rose," price 2s. 6d.; "Hints on Planting Roses," price 7d.; and the Rose Annual for 1917, price 2s. 6d., of the Hon. Secretary.

COURTNEY PAGE, Hon. Secretary.

MARCH, 1917.

25, Victoria Street, Westminster, S.W.1.

Telephone, Victoria 959.



R8

"Where there's a will there's a way."

The Cream of Roses!!

A

FRUIT TREES, true to name, a great speciality.

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NOTICE.

COPIES OF THIS ANNUAL can be obtained by Non-Members, and extra copies by Members of the National Rose Society, from the Hon. Secretary, 25, Victoria Street, Westminster, S.W.1, for HALF-A-CROWN (Post Free).

THE ROSE ANNUAL

For 1917

OF THE

NATIONAL ROSE SOCIETY.

Edited by

H. R. DARLINGTON, F.L.S.,

AND

COURTNEY PAGE.

"And for the greate delite and pleasaunce
They have to the floure, and so reverently
They unto it do such grete obelsaunce
As ye may see."

Chaucer.

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1917.

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Land, Dec. Dulan 7-25-2**7** 1470/

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FOUNDED 7TH DECEMBER, 1876.

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PREFACE.

"The Rose Annual" appears for the third year in war time, and has necessarily been affected by the prevailing conditions. So far as these islands are concerned, there has been no diminution of the output of new Roses, and an attempt has been made to illustrate those that have received awards; but the tightening of "the churlish knot of all abhorred war" has imposed other and severer duties on many of us. Some who would have helped in more quiet times are unable to do so, and the result is that it has been more difficult to carry out the scheme suggested by the Publications Committee, and the articles are of a less connected character than had been intended.

The comparatively recent development of the single Roses has led to an increase in the attention devoted to many of the more beautiful species of wild Roses, and this is reflected in several articles in this volume.

The Society has to mourn the loss of its President, Mr. Edward Mawley, and Mr. H. E. Molyneux, some time Treasurer of the Society, who in the past have often contributed to these pages.

The thanks of the Editors and Members of the Society are due to those who have contributed the following articles.

H. R. DARLINGTON COURTNEY PAGE

Editors.

January, 1917.

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Presidents of the National Rose Society.

The Very Rev. DEAN HOLE, V.M.H. 1877-1904.

CHARLES E. SHEA.

E. B. LINDSELL. 1907 and 1908.

Rev. F. PAGE-ROBERTS. 1909 and 1910.

Rev. J. H. PEMBERTON.
1911 and 1912.

CHARLES E. SHEA.
1913 and 1914.

EDWARD MAWLEY, V.M.H. 1915 and 1916.

EDWARD J. HOLLAND.

Dean Hole Medalists.

1909. Rev. J. H. Pemberton.

1910. Edward Mawley, V.M.H.

1912. George Dickson, V.M.H.

1914. Charles E. Shea.

Mational Rose Society.

REPORT OF THE COUNCIL FOR THE YEAR 1916.

THE Council have again to report that the work of the Society has gone on successfully during the past year, and in view of the adverse war conditions the position of the Society must be regarded as highly satisfactory.

The Shows.

Three Shows have been held, the Spring Show in the Horticultural Hall on April 14th, the Summer Show at the Royal Botanic Gardens on June 30th, and the Autumn Show on September 19th in the Horticultural Hall. Weather conditions prior to the Summer and Autumn Shows were not favourable, and the exhibits were hardly up to the usual standard either in number or quality; nevertheless, what must be regarded as fine collections of blooms were brought together on both occasions.

Our Royal Patroness Queen Alexandra, againg graciously honoured the Society by paying a prolonged visit to the Summer Show, and displaying great interest in the exhibits. Afterwards Her Majesty was pleased to accept and to take away with her three beautiful baskets of Roses, chosen from grand collections exhibited by Messrs. A. Dickson & Sons, Messrs. Hugh Dickson, Ltd., and Messrs. Chaplin Bros. The whole of the gate moncy taken at this Show, amounting to £76, was handed over to the British Red Cross Society.

No Provincial Show was found possible this year, but in order to give raisers of New Seedling Roses an additional opportunity of staging their productions for the awards of the Society, the Council decided that, if it were possible, a special display should be held at the Horticultural Hall. The Secretary of the Royal Horticultural Society willingly co-operated, and arranged for ample table space at the fortnightly Show on July 18th. The experiment proved a great success, no less than 56 new varieties being staged, many of them of high merit.

The Publications.

The "Rose Annual" was sent to members in March last, and the new combined "Official List of Roses and Pruning Book," a work which it is hoped will prove of great assistance to members, is nearing completion. The thanks of the Council are again due to the members of the Publications Committee, who have devoted so much time and care to this important branch of the Society's work.

Membership.

During the year no less than 326 new Members have joined the Society; after allowing for losses by death and resignation, the total number of Members is now 4,837.

Finance.

The total receipts for the past year, including a balance of £238 7s. 7d. brought forward, amounted to £3,323 12s. 4d., and the expenditure to £3,220 12s. 8d., leaving a balance at the bankers of £103 0s. 1d.

The Late President.

With the deepest regret the Council have to record the death, in September last, of their President, Mr. Edward Mawley. He had been associated with the Society during the whole of its forty years' existence. Two years ago, owing to advancing years, and the increasing burden of work occasioned by the growth of the Society, he resigned the position of Hon. Secretary, which he had filled with

exceptional ability and devotion for the long period of 37 years, having earned by his unsparing labour and effort in the Society's interests the lasting gratitude of Members and the warm affection of those with whom he had been associated. On his retirement from the Hon. Secretaryship in December, 1914, he was elected President, an honour which could never be more worthily bestowed. The Council desire to place on record their appreciation of his invaluable services and to pay a tribute of affectionate regard to one whose name will always be held in high honour by the National Rose Society.

The Late Mr. Herbert E. Molyneux.

The Council have also to deplore the death of Mr. H. E. Molyneux, who for many years took an active part in the affairs of the Society. For four years, 1904-8, he discharged the duties of Hon. Treasurer with conspicuous ability, and he was an untiring worker in connection with the publications issued by the Society. Particularly interesting were his articles on the newer Roses, of which he made a special study. When his duties at Southampton prevented him from attending the meetings of the Council as an Acting Vice-President, he was made an Honorary Vice-President of the Society.

Thanks.

The Council tender their best thanks to those Members who have again so kindly presented Special Prizes. They also desire to acknowledge the good work done by Local Secretaries and friends in securing new Members, and they are particularly grateful to Miss Willmott, V.M.H., one of the Society's Vice-Patronesses, for her continued kind interest in all matters connected with the welfare of the Society. The Council greatly appreciate the loyalty with which members have stood by the Society during atroublous period, and they regard it as of happy omen for the future.

Shows in 1917.

The Spring Show has been provisionally fixed to takeplace in the Royal Horticultural Hall, Vincent Square, Westminster, on Friday, April 20th, the Metropolitan Exhibition in the Royal Botanic Gardens, Regent's Park, on Friday, July 6th, and the Autumn Exhibition in the Royal Horticultural Hall, Vincent Square, Westminster, on Tuesday, September 18th; all these fixtures must be subject to the exigencies of the war.

Publications in 1917.

The new combined "Select List of Roses and Instructions for Pruning" will, it is hoped, be issued to Members during January.

The "Rose Annual for 1917," containing a number of helpful articles interesting to amateur Rosarians generally, will be issued early in April next.

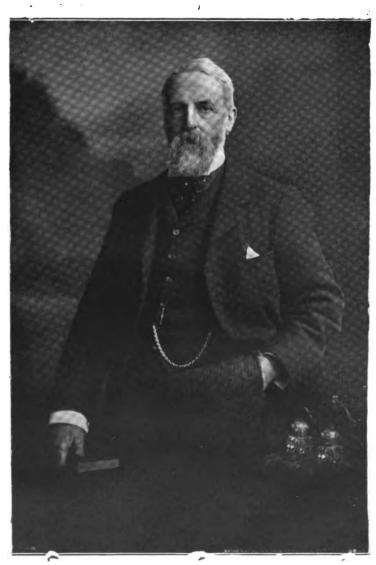
NOTE.—Since this report was presented the Council have decided to abandon the Spring Show.

THE NATIONAL ROSE SOCIETY.

Summary of Receipts and Payments for the Year ending 31st December, 1916.

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To Balance brought down		I have examined the books of the Society for the year ending 31st December, 1916, and hereby certify the above Summary of Receipts and Payments to be in accordance therewith. The Bank Balance and the Society have been verified by me. (Signed) CHARLES BRANNAN, 12, King Street, R.C. Ohartered Accountant.	ety for the year ending 33 we Summary of Receipts and the Reserve Fund of the RBANNAN, Chartered Accountant.	of Receipt Barbara Pund N,		31st sind the the





THE LATE PRESIDENT NATIONAL ROSE SOCIETY.
EDWARD MAWLEY, V.M.H.
Hon. Secretary from 1877 to 1914.

EDWARD MAWLEY, V.M.H.

By H. R. DARLINGTON, Deputy President N.R.S.

Edward Mawley, President of the National Rose Society, died at Berkhamsted, at the age of 74, after a short illness, on the 15th of September, 1916. By a melancholy coincidence he was buried on the afternoon of the day on which the National Rose Society held their Autumn Show.

No greater sorrow could fall on the Society, and not only his friends, but the whole body of members, will mourn his loss. For 37 years he had worked for the Society as Secretary, and he was approaching the close of his second year of office as President. Under his care the Society had grown from a few members and serious financial difficulty to a membership of over 6,000 and an assured position in the horticultural life of the country. It is to his constant care and assiduous attention to the wants of its members that the success of the Society has been due, and the history of his life is also the history of the Society, while to those who have become interested in the management of its affairs the friendship of Edward Mawley has been alike their highest privilege, and the most potent and pleasing incentive and encouragement to a continuance of their labours.

Edward Mawley was educated as an architect, and followed this profession for several years. His father lived for some time at Fairford, in Gloucestershire, and was keenly interested in gardening, for his son has himself told us that he had there the finest Rose border in the County. Afterwards when his sons became engaged in work in London he moved to Richmond to make a home for them there. It was not, however, until after the father's death, when the

family moved to Croydon, that Edward Mawley became interested in Rose growing on his own account. Only in last year's "Rose Annual" Mr. Mawley described to us his first efforts in this direction, and I will not repeat the story here.

The National Rose Society was founded 40 years ago (December, 1876). Edward Mawley attended the meeting at which its foundation was decided on,* and became very active in securing recruits for the Society.

The officers elected were Dean (then Canon) Hole, President; Rev. H. H. D'ombrain, Secretary; and Horace K. Mayor, Treasurer. The Society's early ventures were not a financial success, and H. K. Mayor soon resigned the position of Treasurer, being succeeded by W. Scott. Mr. D'ombrain then secured the help of Edward Mawley to act with him as co-Secretary, and from that time onward the bulk of the work of the Society fell on Mawley's shoulders.

The early years must have been for the officers a period of some anxiety, for at first they were unable to pay the exhibitors their prize money, and it was not till 1879 that they were able to wipe off this debt, and begin the new year of 1880 with a balance of £57. Two years later the Society published its first catalogue of Exhibition Roses—perhaps the first publication of the Society; a second edition followed in 1884, and a supplement in 1888. It is interesting to notice how soon after sufficient funds became available this work was taken in hand. In the same year Mr. Scott, the Treasurer, died, and was succeeded by Mr. T. B. Haywood.

^{*} The gathering was a representative one, and amongst those present were included: — Dean Hole, Rev. C. H. Bulmer, W. Cutbush, John Cranston. W. Robinson, G. Paul, Capt. Christy, Herbert J. Adams, Horace K. Mayor, R. N. G. Baker, Rev. J. B. M. Camm, Dr. Robert Hogg, H. K. May, W. E. Ball, James McIntosh, T. Francis Rivers, Charles Noble, R. T. Tootell, Lewis A. Killick, T. J. Mann, John Mayo, B. R. Cant. Edward Mawley, George P. Hawtrey, John Laing, Charles Turner, Hubert Benstead, Wm. Paul, J. L. Curtis, A. W. Paul, Hon. and Rev. J. T. Boscawen, R. B. Cater. W. Scott. Maurice Young, J. W. Parker. George Prince and Francis Bell.



Some of the older members of the Society may perhaps recall Mr. D'ombrain's notice of Edward Mawley in the "Rosarians' Year Book for 1895," and incidentally it tells us something of his early successes. He says:—

"There are many members of our Society who know something of the accurate and painstaking labours of my brother Secretary, but no one knows them so well as I do myself. We have been associated together for many years, and I think it quite impossible to exaggerate the services he has rendered to our National Society. Accustomed by his previous scientific training to accuracy of statement and careful consideration of minute details, he has brought these to bear on all matters, financial and otherwise, pertaining to the Society's operations. Bringing to his work, then, great patience, an unruffled temper, and great courtesy, he has been enabled to avoid much of that friction which is inseparable, more or less, in the management of societies where personal interests are involved.

"I little thought on that dull December morning eighteen years ago, when I had the audacity to ask Rose growers to meet together for the purpose of founding a National Society, that in that quiet and unobtrusive gentleman who, with his retiring ways, was ensconced in a corner of the room, I should find one who for so many years was to be my fellow labourer in the secretariat; but so it was. My late friend, Mr. Horace Mayor, after a brief period of office, resigned the Secretaryship, and, on my solicitation, Mr. Mawley accepted it, and I hope he may for many years hold that position, even after I have myself retired from being his fellow labourer.

"Mr. Mawley when I first knew him resided at Croydon. He had there but a small garden, which, however, came to be well known through the success which its owner gained as an exhibitor of Roses, a love for which he inherited from

his father. I need hardly say that this villa garden was a pattern of neatness, and that there was always much to interest, not only in his flowers, but in his scientific apparatus; indeed, before you got to the house you saw attached to the chimney what was very suggestive of a pawnbroker's shop, only there were four balls instead of three. This was only an indication of what might be expected afterwards. During this time Mr. Mawley was a most successful exhibitor; in his garden here he never had more than 400 plants (the exact number being 360), but so successful was he that he used to be called 'The Champion of the Light Weights.' He exhibited at not merely local shows, but at those of the National Rose Society, showing at the Crystal Falace (N.R.S.), Sheffield (N.R.S.), Manchester (N.R.S.), Alexandra Palace, Birmingham, Reigate, Horsham, Richmond, Chislehurst, Croydon, Norwood, and Sutton. He staged thirty-one boxes of Roses, which gained him thirty-one prizes—twentyfour firsts, four seconds, one third, and two fourth prizes. With the exception of Windsor last year (i.e., 1894), when he had no Roses out, he has exhibited at every exhibition of the National Rose Society.

"In 1885 Mr. Mawley removed to Berkhamsted, after looking about in various directions, and I think he might have selected a more favourable spot for Roses, as it was a very cold soil and climate. Here, however, he has enlarged his operations, moved up into higher classes, and been successful there also, having won many prizes—medals for the best Hybrid Perpetual in 1888 and the best Tea in 1892; while in 1894 he ventured to Hitchin and snatched the prize for twenty-four from the champion grower, Mr. E. B. Lindsell.

"All readers of the 'Rosarians' Year Book' will know how much they are indebted to Mr. Mawley for the accurate observations with regard to Rose weather which he has for somany years contributed to its pages; to those who care to look back to them they form a complete record of the vicissitudes of weather which the Rose grower has had to put up with. I may also add he was the designer of its cover. He also every year contributes to the 'Journal of Horticulture' a most careful analysis of the prize winning Roses at the Crystal Palace Exhibition, which shows his method of careful analysis. He has done the same for the Chrysanthemum and Dahlia, for he is a successful grower and exhibitor of both these flowers.

"Mr. Mawley is also well known as an active member of the Council of the Royal Meteorological Society, of which he has been the Phenological Recorder for the last five years. This term may puzzle some of the readers of the 'Year Book,' but it refers to the dates of the appearance of various flowers, insects, etc., as indicating the earliness or the lateness of the season. He has, I believe, at Berkhamsted the most carefully equipped private meteorological observatory in the country, having instruments which record automatically and continuously atmospheric pressure (barometer), temperature, the humidity of the air, rainfall, sunshine, and the velocity and direction of the wind; in fact, he performs the feat of riding two horses at once—a very rare one indeed to do successfully, but he manages his floricultural and meteorological schemes with great skill."

Such was Mr. D'ombrain's account, and for upwards of twenty years since then Mr. Mawley has continued many of his activities therein referred to. Thus, the Rose analysis was carefully made annually down to last year, as our readers are aware. This year the analysis has been prepared by Mr. Courtney Page, so that the work is still carried on. Mr. Mawley continued to exhibit for a number of years, and some short time since he informed me that he believed he had been awarded over 200 prizes.

Members of the Society are aware that, after the first show, the Metropolitan Exhibitions were held at the Crystal Palace for upwards of 20 years. During this period the membership rose but slowly to a little over 500. In 1901, however, a change was made, and the reward of Mr. Mawley's ceaseless care began to appear. The N.R.S. Metropolitan Show was moved to the gardens of the Inner Temple, and this step brought more money from the gate. For this increase of income he had been waiting, and he made his next move at once by the issue of the first "Official Catalogue of Roses." This was not a general List of Roses, like the Nomes des Roses, but rather a select list of those Roses at the time considered most worthy of being cultivated. It formed a thin quarto volume, and was prefaced by three full-page photographs of typical exhibition Roses—Gustave Piganeau, Mrs. W. J. Grant, and Maman Cochet, and three Garden Roses, The Garland, R. multiflora, and Gruss an Teplitz. A new edition in 1906 was reduced to its present more convenient octavo shape, with rounded edges, and Mr. Mawley had intended that a fresh edition, revised to date, should be issued every second year, which was in fact done down to the outbreak of war.

In four years the number of members of the Society had trebled, and Mr. Mawley stepped forward once more with the "Handbook on Pruning Roses," prepared with the assistance of the Publications Committee, and first issued in 1905. This is the most sought after of all the Society's publications. In 1907, when the membership had risen to over 2,000, he brought out the first number of the "Rose Annual," which has continued to appear every year, and which he edited until he resigned the secretaryship. The next year, 1908, he got Messrs. Theobald and Massee to prepare the handbook on the "Enemies of the Rose," and distributed it to the members.

Mr. Mawley believed that each new publication of the Society amply repaid its cost by the increase in the number of new members he thereby obtained, and in the Annual for 1914 he prepared a graphic chart designed to show how the Society's publications had affected the membership. Of course, it is also to be noticed that the rise in membership synchronised with the holding of the shows in London,

and the additions of the autumn and spring shows, which are also noted in Mr. Mawley's chart. Whichever be the factor that has most contributed to the happy result he attained, there can be little question that much of the usefulness of the Society to amateurs at large has been due to the publications circulated among them under Mr. Mawley's auspices.

In the year 1904 Mr. Mawley received from the Royal Horticultural Society the Victoria Medal of Honour in recognition of his services to horticulture, the number of medalists, 63, representing the number of years of Queen Victoria's reign, and it is believed that Mr. Mawley received this honour in succession to Dean Hole, who died in that year, having been President of the National Rose Society since its foundation. If this be so the great Dean could have had no more fitting successor than one who, like himself, had the love of Roses in his heart.

The following year, 1905, Mr. D'ombrain died at the age of 87 years. For long before his death the whole of the work of the Society had virtually rested on Mr. Mawley's shoulders, and thenceforward he remained sole secretary until his resignation.

In 1910 the N.R.S., at their annual meeting, awarded Mr. Mawley the Dean Hole Memorial Medal, which is given for special work in the service of the Queen of Flowers, and is the highest honour in their power to bestow.

He resigned his position as secretary in 1914, and was elected President of the Society, a position he held till his death.

Of late years Mr. Mawley had ceased to exhibit in the classes for exhibition blooms in boxes, but he still showed from time to time in the decorative classes. In these he took prizes in 1911 at the Metropolitan and the Provincial Show at Ulverston, and in 1912 at the Metropolitan Show he secured a 1st prize and a 3rd in the Autumn Show, which was, I think, the last occasion on which he exhibited.



Notwithstanding this, he never lost his early love for the full exhibition Rose, and to the end of his life was as pleased as ever to find a perfectly-formed Gustave Piganeau or Mrs. John Laing in his garden. I doubt whether he ever quite appreciated the rather modern taste for the single Roses, and he became a little impatient at finding the extent to which they were adopted in the classes for table decorations and other ladies' artistic classes. He was, I remember, very pleased when the classes for dinner tables were divided into two, one for single-flowered and the other for Roses with double flowers. "Now," he said, "we shall see some real Roses as they ought to be shown."

It is a little curious that while his taste in Roses preferred the double form, in the case of the Dahlia the singles seemed chiefly to attract him. It is true that at one time he interested himself in the Cactus varieties, but later he took up the singles almost exclusively. In these he was very particular that the flower should attain his idea of perfection in form, with a good eye, and a full and nicely-rounded perianth. He was accustomed to raise many seedlings of the single Dahlia, and by ruthlessly destroying those that failed to attain his standard of excellence, he secured several good forms of this flower.

Mr. Mawley was a keen supporter of the National Dahlia Society for many years, and in 1900 he was elected President of that body, a post which he retained for upwards of ten years.

Mr. Mawley devoted much of his time to the science of meteorology, in which he became an expert of the first rank. Nowhere in the country was a more completely equipped private meteorological observatory to be found than at his house at Berkhamsted. Many years ago he became a member of the Council of the Royal Meteorological Society, and for two years he acted as secretary. It was therefore no surprise to his friends to find him appointed President of that body in the year 1904. His careful observations and reports were carried on with unceasing industry. The annual articles on Rose weather he contributed to the "Rosarians' Year Book" have

already been mentioned, and readers of the "Gardeners' Chronicle" will remember the reports on "The Weather in West Herts" that appeared week by week with unfailing regularity over a long period of years. His first report in this journal appeared on the 24th July, 1900 (p. 127), and the last on the 16th September of this year, the day after his death.

Mr. Mawley joined the Hertfordshire Natural History Society in 1890, and became much interested in its work. In the following year he read two papers before the Society: the first was on "A Simple Method of Taking Phenological Observations," in which he proposed a scheme for observing the dates of flowering of certain common plants in each year in Hertfordshire, and somewhat similar statistics as to the arrival and departure of some migratory birds. This scheme, with the assistance of a small body of observers throughout the county, he subsequently carried into effect, and reported the result from time to time in papers read to the Society. The second paper was on "The Percolation of Rain through comparatively light and through comparatively Heavy Soil." The experiments recorded in it were a development of previous experiments designed with much ingenuity and skill to test the effect of mulching on horticultural soils. He found that over a series of years a sensibly greater quantity of water passed through the heavy than through the light soil, and formulated the results he obtained in four propositions: (1) Taking the whole year there is greater evaporation from a comparatively light soil than from soil of a more retentive nature; and consequently less rain passes through it than through the same thickness of heavy soil. (2) The differences between the two soils as regards drainage and evaporation are considerably greater during the summer than during the winter half of a drainage year. (3) During dry weather the heavier soil invariably retains more moisture than the lighter one. (4) The lighter soil is slightly warmer but less equable in temperature than the heavier soil.

I have referred to this paper in detail, and I might have mentioned others, to show the extremely careful and practical character of Mr. Mawley's enquiries. This is a feature of everything he undertook. The means he adopted and the apparatus he employed were usually of the simplest character, and the success he obtained was due almost entirely to the care with which his observations were recorded and the accuracy of his statement.

I may illustrate this by another incident connected with soil. In 1898, partly through the liberality of Mr. A. Hill Gray, a small committee of the N.R.S. was appointed to investigate the character of Rose soils, and they decided to have samples of soil taken from nurseries and gardens where Roses had been grown with most success. These were subsequently analysed by Dr. Bernard Dyer, and the result published in a small pamphlet issued to members of the Society. The task of taking the samples was deputed to Mr. Mawley, who selected the celebrated Rose gardens at Colchester, Cheshunt, Longworth (Oxford) and Hitchin. When Mr. Mawley visited the late Mr. George Prince at Longworth, and informed him of his errand, the two sallied forth into the garden, and Mr. Prince, armed with spade and bucket, dug up a spadeful from the first vacant space they happened on. This was far from satisfying Mr. Mawley, who, to Mr. Prince's amusement, proceeded to make an exact study of the garden, after which he took a sample first from one place and then from another until he was satisfied that he had procured a representative selection of samples of the soil of the nursery.

The results of this enterprise were perhaps a little disappointing, the only common feature of the soils appearing to be that they were in good physical condition and well drained, so as to lead Dr. Dyer to conclude that if any part of the special productiveness of the various nurseries, in the matter of good Roses, was to be attributed to natural conditions rather than the skill of the growers, it was to be sought for in local climatic influences and good drainage.

Truly, if genius be an infinite capacity for taking pains, Mr. Mawley is worthy of a high place among his contemporaries. He

early grasped the supreme value, for the work he set himself to do, of that minute attention to detail which the greatest of the Roman orators held to be more potent than even natural ability or skill.* To secure the supreme point of accuracy no enquiry was too long, no labour was too much trouble, and, through it all, the work was idealised by his innate sense of beauty, and the constant endeavour to apply the knowledge he had acquired for the benefit of the many and the beautifying of the world.

In the long discussions that took place in the Publications Committee, the rule by which he tested each proposition was how would it help the members of the Society. "Think of the 6,000, how will it affect them?" It was this intensely practical spirit that set itself on one side, and was constantly on the alert for the means of helping others that lay at the root of his endeavours, and ensured the success that he achieved.

His success, which lay in many directions, is abundantly proved by the condition in which—notwithstanding the war—he left the N.R.S. at his death.

Quiet and unassuming in character, he possessed the great gift of making a friend whenever he found a fellow-worker. To lose a friend is the greatest of all losses, and his friends were so many, that our sorrow for his loss must be widely shared. But, in truth, the life of Edward Mawley has been an enviable one; quietly and steadily successful in nearly all his undertakings, and full of work to the last, he has left a lasting memorial in the Society he assisted to found, and an undying memory of affection in the hearts of his friends.

^{*} Assiduus usus uni rei deditus ingenium et artem sæpe vincit. -- Cicero.

THE NEW PRESIDENT.

Mr. E. J. Holland, the President of the National Rose Society, has earned that position of honour by his all-round activities in the interests of the Society. Recognition of his valuable work as a member of the Council, and its Committees, led to his election in 1911 as a Vice-President, and when the post of Deputy-President was instituted in 1914 he was the first to hold that office. During the year 1916 he acted as Hon. Treasurer, and the present strong financial position of the Society is largely owing to his efforts. Apart, however, from these qualifications, the President is an enthusiastic Rosarian, with a very wide practical knowledge of Roses and Rose growing. I have vivid recollections of the magnificent blooms staged by him at the Summer Shows a few years back, and more particularly at the Summer Show in 1908, where had he only ventured in where "angels fear to tread," championship honours would assuredly have been his. Of late years his attention has been devoted more particularly to Roses under glass, with equal success, and he has brought some of the very finest exhibits to the Spring Shows of the Society. The wonderful box of William Shean exhibited at the 1915 Show and illustrated in the "Rose Annual" of last year was perhaps his masterpiece. He has been a frequent contributor to the "Rose Annual," and amongst other useful articles from his pen which may perhaps be specially mentioned, are those on the preparation of Rose Beds, and the Cultivation of Roses under Glass. He was also largely responsible for the preparation of the fine set of Lantern Slides now possessed by the Society, and which were shown for the first time at the Conversazione in 1914. As a judge of Roses he has few equals, his knowledge of the exhibition as well as the garden varieties being proverbial, and for a long time he has taken a leading part in the judging of new seedling Roses. To the Society he has been a steady friend, and few have worked harder, or with greater ability, to promote its welfare than he has done, while his unflagging energy, combined with great geniality and warmth of heart, has made for himself a host of friends. He is a Justice of the Peace for the County of Surrey, and an Alderman of the Surrey County Council. His election as a Vice-President of the Society was the occasion of one of those humorous little notes from the late Mr. Edward Mawley, congratulating him on being "J.P. of your county, but V.P. of your country."

COURTNEY PAGE.





EDWARD J. HOLLAND, President National Rose Society, 1917.





(A) R. SPINOSISSIMA. (B) R. ALTAICA.
Photographed in Mr. H. R. Darlington's Garden, Potters Bar.

SOME EARLY-FLOWERING SPECIES OF ROSES.

By H. R. DARLINGTON, Deputy-President N.R.S.

The species have by now acquired a tolerably definite position among Rosarian gardeners, although perhaps they do not use the expression precisely in its botanical significance. Botanists have divided up the genus Rosa into groups and sub-groups, each containing one or more species, while each species may again contain a number of varieties, variations and forms, which appear to be limited only by the amount of study and investigation that has been devoted to the particular section. During the past century the question whether particular forms of Roses should be accorded specific rank, or should be relegated to the position of varieties or variations, has not infrequently led to prolonged and even acrimonious controversy. In his catalogue Raisonné published in 1876, Déséglise admitted over 400 species, exclusive of the American Roses and, though the tendency of recent years has been considerably to restrict the number of species, the botanical species are still very numerous.

Rosarian gardeners, however, are by no means accustomed to restrict the term species to its botanical meaning, but employ it to designate all forms of wild Roses, and even some hybrids, which, for their beauty or interest, they think fit to cultivate in their gardens, and they include in the term many forms which the botanist would relegate to mere varieties, and it is in this sense I shall use the term here.

The greater number of the species are summer flowering only, or more accurately they have only one period in which they produce a copious supply of blossoms, but there are many, such, for instance,

as R. altaica, which almost always give a certain number of adventitious flowers at intervals during the season, and a few, e.g. R. rugosa, R. humilis and R. beggeriana, x moschata, which do this to such an extent that they might almost be considered as perpetuals.

The different species vary much in their time of flowering, some opening their blossoms quite early in May, others, and perhaps the majority, appearing during June; while a few, particularly in the American section, do not open their flowers until quite late in the season, so much so that I have had the variety Nuttalliana in flower at the time of the National Rose Society's autumn show.

It is now generally recognised that most of the species are best treated as flowering shrubs, and should find a place in the open shrubbery, or in borders, or on rock work outside the Rose garden proper, and should not be regarded as in any way forming substitutes for our ordinary garden Roses. To the majority of Rose growers it is probable that the early-flowering forms are most attractive, providing, as they do, a foretaste of the coming Rose season, and often adding nearly a month of Roses to the garden in the early part of the year. It is of some of these early-flowering forms that I propose to say something in this article. For these early Roses we shall look to certain well defined groups. First come the group of the spinosissimae and their allies, the typical form of which is our native Burnet Rose R. spinosissima, which is common in Wales, the North of England and Scotland; then there are the Sericeæ, or silky roses, from the Himalayas and Western China, the Alpinae, or common roses of the European Alps, including the nearly related sections of oxvodon and macrophylla and perhaps R. nipponensis, and one or two of the Sweet Briar section.

Rosa Hugonis is often the earliest to bloom and is a most lovely flower. It was raised from seeds sent to Kew from North Central China about the year 1899; consequently, it is not surprising to find small variations in different specimens. In particular, some forms appear more profuse in flowering than others. The blossoms are





R, Hugonis. Photographed in Mr, H. R. Darlington's Garden, Potters Bar.







R. SERICEA. Photographed in Mr. H. R. Darlington's Garden, Potters Bar.

2-in. or more across, and of a soft yellow colour, produced on short stalks all along the branches. The foliage is light green when young, becoming darker towards autumn, and the leaflets are small, usually eleven in number. The young branches are covered with rather numerous setae, and turn a reddish brown in autumn, while the stems have scattered and fairly strong thorns with straight and not hooked points. The flower buds form in the axils of the leaves of the shoots of the previous season, and appear very early, having usually grown out, and more or less developed in the autumn; and I think it is for this reason that they sometimes suffer from severe winters. Nevertheless they appear to stand winter cold well, but as they begin growing very early they may suffer from late spring pests. I was very much afraid that my plant would have suffered from the intense cold of last March, but it came through it well, and the flowers have seldom been better than in May, 1916.

Rosa sericea and its variety pteracantha share with R. omeiensis the peculiarity of producing flowers with four, instead of five, petals, arranged like a Maltese cross. They are white in colour, and though the individual flowers are small and very fleeting, they are produced in such quantity that the plant is in bloom for some few weeks. The earliest flowers usually appear about the second week in May, the earliest date I have noticed being the 5th of May. It will form a large bush 8-ft. or 9-ft. in height and 10-ft. or 12-ft. across if allowed to grow. The foliage is very fernlike in appearance, the leaves containing from seven to thirteen, and usually eleven rather narrow leaflets, produced in tufts of two to five on very short side stems, so that the plant is very decorative all the season. The flowers are succeeded by rather small roundish berries, which are orange in some varieties and red in others. The variety pteracantha (the word meaning winged thorned) has very large thorns, much dilated at the base, which are translucent and red when young, and in order to get the effect of these young thorns in the sunlight I have been in the habit of cutting this Rose down after it has flowered, a procedure which causes a considerable check to the plant. I have raised a number of seedlings from the variety pteracantha, and have

noticed that so far they have not formed winged thorns, but straight thorns, like the ordinary or typical R. sericea. They may perhaps form winged thorns when they become more mature, but if not, one will be inclined to suspect the winged thorns to be something of the nature of a freak.

R. omeiensis, which clearly belongs to this group, is said to grow 15-ft. or 20-ft. high in its native country, which is Central and Western China. I am not aware of its attaining anything like these proportions in this country. My plant shows very pronounced red bases to the stipules of the leaves, and this has a pleasing effect. The Rose takes its name from Mt. Omi in China. It is quite likely that it may one day be grouped as a variety of R. sericea, which it much resembles. Professor Crépin suggested that the varieties of this Rose might one day be found to be almost as numerous as those of R. canina, and we have yet so much to learn from China that such a thing is by no means impossible.

R. spinosissima, the Burnet Rose, is a most charming little plant. It is a native of this country, being particularly abundant near our Western coasts, Cornwall, Wales, Cumberland and the West of Scotland, though by no means confined to these localities. It is particularly suitable for growing on the rockery where the poor soil keeps it dwarf, and it produces its comparatively large solitary flowers on stems only a few inches high. These flowers are cream colour, and look very well against the finely divided green foliage. There is a pretty little garden variety called Brightnesswith carmine-red flowers, also very dwarf. This Rose is often called R. pimpinellifolia, especially by continental writers. The names spinosissima and pimpinellifolia both go back to Linnæus, and appear in the Second and Third Edition of his Species Plantarum (though only the former in the First Edition). Much learning has been devoted to the endeavour to ascertain what Roses Linnæus meant by these two names, and it remains doubtful. M. Déséglisc (1) suggests that pimpinellifolia should be confined to varieties with

¹ Essai monographique, p. 42-46. Cat-raisonné, p. 88.





STANWELL PERPETUAL. (PER. SCOTCH).
Photographed in Mr. H. R. Darlington's Garden, Potters Bar.

rose-coloured flowers. Professor Crépin thought that Linnæus's R. pimpinellifolia represented our Burnet Rose, and that his spinosissima was our modern R. cinnamomea; (4) while Major Wolley Dod, following Lindley, makes R. spinosissima a form with glandular or setose flower stalks (peduncles), R. pimpinellifolia being a similar Rose but with smooth flower stalks. If this be right, then the -common Rose of Great Britain should be called R. spinosissima, var. pimpinellifolia, for the form with smooth flower stalks is decidedly the commoner of the two in this country. Botanists may find it useful to preserve these fine distinctions, but from the gardener's point of view it seems unnecessary to distinguish these two forms under different names, and we may perhaps conveniently refer to both forms under the name R. spinosissima. The chief characteristics of the group are that the sepals remain erect, crowning the fruit after flowering; the flowers are usually solitary, i.e., produced singly, and not in bunches; the leaves have generally nine or more leaflets, and the prickles are straight, large and small ones being generally intermixed on the stems.

This group has given us some of our most beautiful early varieties; from it come the well-known Scotch Roses, of which the garden varieties were once much more numerous than those now generally grown. They are, in fact, now seldom grown to name, but are obtainable in various colours—pink, blush creamy white, and yellow. They are most useful for dwarf hedges of 2ft. to 3-ft. in height, the yellow form being the dwarfest, and will grow and flower well in the driest positions where few other Roses would thrive. To look well they are very dependent on fine weather happening at the time they come into flower.

Stanwell Perpetual is a very charming derivative of the Scotch Roses. The flowers are double but not full, of a pale blush colour, borne profusely in May and early summer, and flowering again, but to a somewhat less extent, in August and September and right into

² Bull. Herb. Boissier, vol. v.

November. They have the charm of a delightful fragrance, and canbe grown without trouble, for they require little pruning, and if the bed is tolerably made at the beginning, will continue to do well for many years without attention, beyond keeping the ground round them free from weeds. This is so charming a Rose that it might well be more extensively grown than is at present the case, and having regard to its many good qualities, it seems curious that it has not been employed for further hybridisation.

I have not as yet discovered the actual date of its introduction, but it must have been quite early in last century. In her "Rose Fanciers' Manual "Mrs. Gore says: "The numerous varieties of our native Scotch Rose are in high estimation on the Continent, as well as many others obtained in England, such as Smithia, a double yellow Rose, obtained by the gardener of Lady Liverpool; the George IV., obtained by Rivers junior; the Stanwell Perpetual, an accidental hybrid found in Mrs. Lee's garden at Stanwell; and many varieties of Moss Roses, the greater number of which beautiful family were obtained in England." Now Mrs. Gore's book has nodate, but according to Don Vergara's "Bibliografia de la Rosa." her book was published in 1838. Stanwell Perpetual must therefore date from before this year. I presume the Stanwell from which it takes it birth and name is the Middlesex village lying two or three miles northward of Staines in the direction of West Drayton. In habit and foliage the plant has considerable resemblance to the Scotch Roses, but in other respects, in flower and fragrance, one is reminded of the Damask Rose, and there can be little doubt that these two plants have played a part in its production.

Be that as it may, Stanwell Perpetual is a charming little flower, and the plant is very pleasing in the garden either as a bush or, better still, as a little group of half a dozen bushes or when grown on a low standard. There are, it is true, other perpetual Scotch Roses, but I think none so good as Stanwell Perpetual.

Rosa altaica (Lindley's R. grandiflora) is in some ways the finest of the spinosissima group, and, as Lindley observes, it is "too.

remarkable a plant to escape notice." It takes its name from the Altai Mountains in Siberia, whence it comes, and as we might expect from its habitat is a most hardy and satisfactory plant. The flowers are large, of a creamy white with fine yellow stamens, and are produced in quantity early in May; while at intervals through the summer a solitary flower will suddenly appear on the bush.

The plant increases freely by means of suckers, and if these are removed and planted elsewhere they soon develop into separate bushes. It is, in fact, best to do this from time to time, getting rid of the old bushes after six or seven years. It forms a very pleasing subject for a dwarf hedge of 3-ft. or 4-ft. in height. The berries are a fine purplish black, and though not so showy as those of the red-fruited Roses, look well when arranged with them in vases; it is generally necessary for this purpose to remove some of the foliage to get the best effect.

There are several yellow forms nearly allied to R. spinosissima. R. hispida is a plant very similar in habit to R. altaica, but less compact in its foliage, and with large, solitary, soft, creamy-yellow flowers. Its stems have numerous fine prickles (setae), but no spines, and the berries are purplish black. It is the same, or very similar, to Lindley and Pursh's R. lutescens. R. xanthina, on the other hand, has no setae, which is curious in this group, but thin straight spines. The flowers are deeper yellow than in R. hispida, and a well grown bush in full flower is a fine sight. The berries are blackish, but not so polished as in R. altaica. It appears that double flowers of this species are cultivated in China, and that it was from a specimen of one of these that Lindley gave his short description of the species, the origin of which appears to be still somewhat obscure. R. spinosissima var. lutea is the deepest yellow of the three. It is thought possibly to be a hybrid of R. lutea, but the point is still open to further investigation. The origin of the yellow forms of Roses is a question of much interest. Crépin thought that the discovery of R. Rapini, in Asia Minor, which he regarded as the single form of R. sulphurea, threw some light on the question, but this Rose seems at present unobtainable. Mme. Micheli, of the Chateau du Crest, in France, seems to have had a plant of it, which has unfortunately been lost.

Intermediate between this section and the alpines is a very interesting little plant, R. rubella. It is a native of Siberia, but is also found on the Continent of Europe, and a few specimens have been reported from the north-east coast of Great Britain. It has long been fairly common in botanic gardens, where it seems to have proved something of a puzzle to botanists, some (among them Professor Crépin) referring it to the spinosissimae; others (e.g. Pallas) confusing it with R. alpina; and others, again, regarding it as a hybrid between the two. My impression is that I have seen more than one form of this Rose, and that the foliage in some of them resembles R. alpina more nearly than it does in others. If this be correct it seems to favour the hybrid theory. Some years ago I received a very beautiful form of this Rose from Mr. Mawley. The flowers are Rose-coloured, and the foliage is particularly attractive, even bearing a slight resemblance to that of R. macrophylla, and is retained in the plant well into autumn, much longer than is that of R. alpina. Its principal flowering is generally a few days later than R. altaica, beginning about the middle of May; but in favourable conditions it will give a few flowers later, and as I write, in the last days of October, my plant has been more or less in flower for the past three weeks, and now has twenty or thirty flowers open. or on the point of doing so. The leaves of this form have generally 13 leaflets, and the brownish stems are nearly smooth, with very few thorns or setae.

R. alpina, as I have grown it, is a somewhat commonplace plant, though welcome for its earliness, and the flowers, which are blood red when first opened, rapidly take a somewhat faded appearance. It is well known for its smooth stems without prickles. There is, however, a more beautiful form of this Rose, sold under the name R. alpina pendulina (pendulina was the name under which Linnæus in all probability referred to the alpinae), in which the fruits are



R. NIPPONENSIS.
Photographed in Mr. H. R. Darlington's Garden, Potters Bar.



pendulous and urn shaped. Both in flower, fruit and foliage this form seems to me more attractive than the type. The foliage is darker than that of the type, and sometimes faintly tinged with red, particularly about the stipules. The flowers are a fine blood red. R. nipponensis is another early Rose of somewhat similar, though rather brighter, colouring, and slightly larger. From its foliage and habit one might easily conceive it to be a hybrid between some form of R. rugosa and an alpina or macrophylla variety. This, at all events, gives some idea of its appearance. It is hardy, and has the advantage of holding its own under somewhat adverse circumstances. As its name indicates, it was introduced into this country from Japan. The stems are covered with very numerous straight spines, and the flowers are followed by berries of a fine red colour.

R. macrophylla is so called from the size of its leaves, which are very long, composed, as a rule, of eleven leaflets of some size, which give the plant a handsome appearance; the flowers are a pale Rose colour with very long sepals and large bracts, and these are followed by curious urn-shaped berries which hang down, crowned by the persistent sepals. It makes a bush of 4-ft. or 5-ft. high and 3-ft. or 4-ft. across.

There is a variety R. macrophylla korolkowi with decidedly more beautiful flowers. These are better filled by the petals, which are of a delightful shade of soft pink.

- R. oxyodon var. haematodes is a fine form, with very striking foliage. R. oxyodon is to the Caucasus what R. alpina is to the European Alps and R. macrophylla to the Himalayas. The flowers are rose-coloured, followed by urn-shaped berries. The species forms a large bush, and is well worth growing.
- R. Fedtschenkoana is a beautiful species from Turkestan. It is a tall grower with very glaucous foliage and white flowers, sometimes solitary, sometimes three or four together. The white flowers look particularly well against the greyish foliage. It was, I believe, first described by Dr. Regel, of St. Petersburgh, who noticed the

resemblance of the foliage in shape to that of the spinosissimae, the leaves have usually nine leaflets rather oval in shape and finely toothed, and there is usually a pair of slender stipular thorns at the base of each leaf; sometimes, especially towards the top of the branches, there is only one thorn at the leaf base. These stipular thorns in pairs seem to point to affinity with some of the cinnamomeæ. Dr. Regel describes these stipular thorns as straight, but in my limited experience I think I may say that most of those I have seen have been slightly hooked, or sickle shaped. Dr. Regel describes four varieties of this Rose, and even in cultivated forms some differences appear; thus some are greener and some more grey than others. Where selection is possible those with the most glaucous grey foliage should be chosen.

The last two Roses I shall mention are allied to the Sweet Briars, and usually come into flower about the end of May or a little later than most of those I have been writing of. R. seraphini is a miniature Rose suitable for the rockery; where in poor soil it will take some time to reach 18 inches in height, and may be kept pruned to about 1-ft. It bears pretty little pink flowers on the end of each branchlet, and these are followed by numerous red berries, which are cheerful even when the leaves fall. It is a native of Corsica, and may be readily raised from seed, self-sown seedlings often appearing round the plants.

The second is **R. inodora**, often sold under the name **R. pulver-ulanta** (a name given by Baker, and not Marschall von Bieberstein's plant of that name). The flowers are white and very beautiful, and the plants make fairly compact bushes of some 2-ft. to 3-ft. high. Though it is apparently now known as R. inodora, the title is something of a misnomer, for it the leaves be crushed or rubbed at the back, the Sweet Briar perfume becomes very marked.

Perhaps I may usefully add a word about pruning. Species in one sense do not require any pruning. That is to say, that provided sufficient space is available all round, most of them can be allowed to grow as they please with good effect, only cleaning out old and -dying branches every few years. Space, however, is a difficulty with most Rose growers, and pruning becomes a necessity. When shall we do it? If we prune in winter or spring we cut off next year's flowers; if in the summer after flowering we destroy the berries, which in many cases are nearly as important. My own practice is to do a certain amount of thinning out during winter, leaving as much young wood as I can, and shortening back only where necessary; and afterwards, when flowering is over, pruning a little more but, preserving as far as possible the stems that have fruited and carry berries well. In pruning, the general principle to be remembered is the same as in the case of garden Roses—cut out the old and leave the new wood.

ROSES IN THE ROCK GARDEN.

By S. ARNOTT, F.R.H.S., Sunnymead, Maxwelltown.

To the garden-lover no attribute of the Queen of Flowers is more striking than her adaptability to each and every phase of gardening. She has no real rival in this respect, and the Rose reigns paramount in our affections as the highest expression of the beauty of flowers. No garden is complete without her presence, and it is folly not to avail ourselves of her grace in the adornment of our pleasaunces.

One of the spheres in which the Rose has been too much neglected has been that of the rock garden. The straight-laced alpinist may look upon the flower as out of harmony with the tiny beauties which engross his favour, but the rock gardening of the present day is based on a more generous interpretation of the term, and provides for the inclusion of plants of greater stature, and more opulent beauties than the miniature gems which are so perfect in their way. It can find room and consideration for many subjects once tabooed by the strict alpinist, who was at one time the leading exponent of rock gardening.

It may now be said with little fear of contradiction that the Rose should find a place in every rock garden worthy of the name. This may be permitted without any reversal of the traditions which should guide us in horticulture. Nature has given us many examples to support and direct us, and where she has led we need not fear to follow. Nay, we can even presume to adopt Shakespeare's dictum that—

"This is an art
Which does mend Nature—change it rather; but
The art itself is Nature."

And, pointing to the many revelations of the beauty of the Rose on natural rock work, seek to draw from these some inspiration which will guide us in our schemes for increasing the delights of our gardens.

Happily, the Rose presents itself in so many forms that she can provide us with flowers for all kinds of rock gardening. Whether we erect a little rockery for the small garden, construct an extensive one of more ambitious proportions, or convert some rocky ravine, cliff side, or old quarry into a garden, we may find a place for the Queen of Flowers, whose beauties will complete the charms of the picture and afford boundless delight to all who worship at Flora's shrine.

Roses for the Small Rock Garden.

For the small garden the choice of Roses is now much larger than in the early days of rock gardening. We have now a number of dwarf Polyantha and other double varieties to supplement the older Roses. Of the latter we have our native Burnet Rose, R. spinosissima, with its creamy flowers and black fruits; a rose-coloured variety of which, called Brightness, is very attractive. There are several allied Roses, under different names, but none more delightful than our native plant, and none more appropriate for our rockeries. From this has been derived a host of what are known as the Scotch Roses, mostly little beauties with small leaves and flowers of different hues. Who does not love William III, only a few inches high, whose small double crimson flowers are so exquisite in the rock garden? Unhappily, many of the old Scotch Roses have dropped out of catalogues, but it is still possible to obtain a considerable number of varying colours, from white through pinks, Roses and crimsons to the yellows.

The little Lawranceana varieties, true "Fairy Roses," as they are called, though a little tender, are gems for the small rockery. By dint of much searching several varieties may be acquired, but even the one generally known, called the typical Lawranceana, is exquisite on a rockery, with its low bushes adorned with double

pink flowers. The dainty China variety, named Pompon de Paris, with its many small pink flowers, is worth securing. In De Meaux and its white variety, with the pink-flowered spong, we have real beauties-old edging Roses of inestimable value for the small rock garden. A miniature of Pompon de Paris, called Minima, is a charming thing. Of rare worth, too, is Rosa nitida, one of the best of the species for the small rock garden. It forms a spreading bush with glossy leaves, which assume the most brilliant colouring in autumn, has crimson stems and spines, and bears rosy-crimson flowers by coral-red fruits. Its height is given as from 12 to 18 inches, but it is taller after it has become established, and may be reckoned as 2-ft. high. Rosa foliolosa, rose colour, is a fairly good species; the hybrid foliolosa x rugosa, and the pretty R. humilis, are all desirable. The dwarf polyanthas are also of high value for the moderate-sized rock garden, but to review these in detail would encroach too much upon space. Some of them are a shade too tall for smaller gardens. It is advisable to see these in the nursery so that the habit and height may be studied. Some of the older varieties, such as Mignonette, Pacquerette, White Pet and others are among the neatest; and the double crimson-purple Blanche Rebatel is of good habit. Anna Marie de Montravel is also excellent. Rosa Seraphini*, said to be a Corsican species and referred to Rosa agrestis by some authorities, has single pink flowers and red berries.

The new dwarf Wichuraianas are promising subjects. Seashell and Iceberg appear to be the best of these charming varieties.

It should be mentioned that the Scotch Roses, Rosa nitida, and several others should be carefully watched lest their suckers encroach on other subjects, and that after becoming established, some species and varieties may grow too tall unless they are kept down by means of the knife.

^{*} R. Seraphini was first described by Viviani in 1808 in his Floræ Italicæ fragmenta p. 67, and the same author in 1824 again referred to it in dealing with the Flora of Corsica. The name has since been recognised by Seringe in the second volume of De Candolle's Prodromus, p. 625, and by other authors. It and R. agrestis are both members of the Sweet Briar group.—[ED.]



Roses for Large Rock Gardens.

When we come to the consideration of the Roses for the larger rock gardens we are confronted with the great difficulty presented by an embarrassing choice.

For trailing over large rocks, forming curtains of beauty over cliffs, or for clothing steep rocky banks, we have a provision too prodigal even to appraise.

When the typical R. Wichuraiana was introduced it was held forth as an acquisition for such a purpose as this. It has been so cultivated with more or less success, but the introduction of its hybrids has discounted its value. Most of these are of the desired habit, trailing over the brows of rocks with the greatest abandonment and charm. Their name is now legion, and catalogues will furnish any with the colours desired. One saving clause may be allowed. This is that these Wichuraiana Roses are not beyond reproach in the way of hardiness in the less favoured parts of the country, where in some winters they are so badly injured that they are crippled for the following summer.

Many of the climbing polyantha and allied Roses are also very beautiful in such places, and lend themselves well to the adornment of the large rock garden. The pinkish-white R. sempervirens, polyantha grandiflora, moschata grandiflora and numbers of others can be successfully used. Some of the old Ayrshire Roses are also excellent.

For big bold bushes in large rock gardens some of the rugosa Roses are very hardsome, and the hybrids of these present us with some acceptable plants. They all need plenty of space. Personally I prefer the single varieties, and whether in bloom or when bearing their brilliant fruits, these plants are really handsome. For trailing over a rock or adorning a rocky bank the rugosa variety named repens alba is superb, with its cascades of white flowers. Some like the rose coloured variety, repens rosea.

Many of the species not generally grown are highly suitable for the large rock garden, the single-flowered forms seeming to accord better than the double blooms with the other plants. They should not, however, be too largely planted, nor to the entire exclusion of others. Yet where there is room we cannot omit the wonderfully coloured R. Moyesii, which may be kept down, as well as many others which, if left alone, would grow too tall. rock garden, too, R. Willmottiae, with its pale pink flowers, is charming. R. alpina, if kept low, is suitable, though inferior to many others. R. gallica pumila, single pink, the vellow R. Hugonis, the invaluable R. lucida, with glossy, autumn-tinted foliage, red flowers and scarlet fruit. R. ferruginea or rubrifolia, with glaucous, plum-coloured leaves, may be kept in bounds, and are all fine plants. R. sericea makes a nice bush; while the variety pteracantha can be placed with telling effect in a position where its arching stems and crimson spines come between the observer and the sun.

For those who desire a brilliant effect, though one to which considerable exception may be taken, some of the old Gallica Roses may appeal. They must, however, be employed with discretion, but even the old striped varieties, such as York and Lancaster, Cottage Maid, Rosa Mundi, and others find favour in the eyes of many when planted on large rockwork. True, they are only summer bloomers. A special note may be made of gallica pumila, a dwarf plant with single flowers of rose colour. When we come to the China Rose we are on more debateable ground even than with the last named but the dwarfer varieties of the China Rose, such as the old Double Scarlet, are not to be dismissed without due consideration. R. indica Miss Lowe is another China of great charm.

The hybrid Teas, hybrid Perpetuals and Teas deserve more carethan can well be afforded them in the rock garden, but there can be no doubt that a judicious employment of the new single Roses in these classes would minister greatly to the enjoyment of theowner. Many of these hybrid singles now coming to the front areso exquisite that they ought to obtain the full consideration of those who contemplate planting Roses in their rock gardens.

New varieties are appearing with such frequency that it is of little use to enumerate them. The pages of the "Annual" will furnish the reader with examples of such charming flowers as these, which appeal to the most fastidious, and hold out to the rock gardener vistas of new charms for the decoration of his garden and beautiful flowers to minister to his enjoyment.

The Rose in the rock garden, if employed with judgment and taste, will render still more fascinating a branch of horticultural practice which is destined to increase in favour as years go on.

THE FLOWER AND THE LEAF.

By Mrs. H. R. DARLINGTON, Park House, Potters Bar.

There is a charming old allegory called "The Flower and the Leaf" (hence the title of this paper) to be found in the Aldine Edition of Chaucer's Poems. Whether or not it was written by Chaucer I believe is still an open question, but, at any rate, it has much of the "dewy freshness" and intense joy in nature, so characteristic of the Father of English Poetry.

The author draws an enchanting picture of a "pleasaunt grove" full of beautiful trees glad with the light of "the bright sonne" and harmonious with the music of the "briddes song."

The lady who finds herself in this grove, and who tells the story, passes on through a narrow path which leads to a pleasant arbour turfed with "greene grass so small, so thicke, so short, so freshe of hewe that most ylike greene wool I thought it was." This simile is perhaps more quaint than poetical. She describes at length how she saw two groups of knights and ladies appear from the wood. The group in green, with chaplets made of "goodly floures white and rede," headed by their Queen Flora, were of course devotees of the flower; those in white wearing "chapelets newe made of laurer greene," followers of the goddess Diana, were worshippers of the Leafe.

An account follows telling how Diana and her suite repair to a "faire laurer that stood fast by," and "with great reverence encline they lowe to thilke tree so soot and faire of hewe." Meantime the suite of Queen Flora came dancing into the mede; in the midst of this they "found a tuft that was all overspread with flowers in compass" and to this they paid reverence. But the great heat of the sun soon withered the fresh colours of the "pretic tendre

flowers," the wind blew them about roughly, and a storm of hail and rain finished the discomfiture of the ladies and knights, who in the open were worshipping the flowers, and they were driven to take shelter with those "clad in white who stoode under the tree," and were unhurt alike by shine or storm.

When the narrator of the story asks a maiden in white why the Knights of the Leafe have more honour than those of the Flower the answer is:

- "Knightes ever shoulde be persevering,
 To seeke honour without feintise or slouth
 Fro wele to better in all manner thing;
 In signe of which, with leaves aye lasting
 They be rewarded after here degré,
 Whose lusty green may not appraised be,
- "But aie keping here beautie fresh and greene; For there nis storme that ne may hem deface, Ne haile nor snow, ne winde nor frostes keene, Wherefore they have this propertie and grace. And for the flour, within a little space Woll be i-lost, so simple of nature

 They be that they no greevance may endure:
- "And every storme will blow hem sone awave."

The Leaf, then, is regarded as something staunch and permanent, while the Flower is looked upon as lovely but fugitive.

Now, though there has been no doubt a wonderful advance during the last few years in the direction of perpetual-flowering Roses, though we may and should have Roses blossoming in our gardens from early May till late November, yet Rose blooms, in common with almost all flowers, though to a greater extent than many, must always be susceptible to changes of weather. A week of drenching rain early in July spoils myriads of half-open Rose buds, converting them from things of beauty into sad and sopping balls.

while a too scorching sun robs them of shape and substance, and a prolonged drought will disfigure them with the depredations of thrip. On the other hand, the foliage of many Roses, though not strictly evergreen like that of the laurel, yet persists during the greater part of the year, and I should like to suggest in this short paper that in choosing our Roses, especially those for beds and pillars, we should think almost as much of the beauty, abundance and durability of the foliage as of the size, colour and shape of the flowers.

In this connection it is interesting to learn that a method has recently been discovered for preserving the green colouring of leaves in specimens which are to be dried for the herbarium, which perhaps may be extended to other uses. The leaves are steeped in a boiling solution of copper acetate in acetic acid (according to a statement in the Press on the authority of Dr. Rendle), which renders the chlorophyll, or green colouring matter, permanent. The more fleeting colours of flowers cannot at present be fixed by this process.

Among the species of wild Roses we find some specially remarkable for beautiful foliage. Sericea, the silky Rose from the Himalayas, has elegantly-cut dark green fern-like foliage; to obtain the best effect it should be grown in an isolated bed on the lawn where the spreading branches can develop to perfection.

In early spring the colouring of the spinosissimas and altaica is a wonderfully vivid green, but later in the year they are perhaps apt to become a little rusty.

Rosa rubrifolia is well known, and its glaucous foliage and red stems are much used for decorative purposes, but the equally lovely Fedtschenkoana and Soulieana, both with soft grey green foliage, are seldom seen in amateurs' gardens. Webbiana has small delicately-cut leaves of a glaucous shade with soft pinkish-red stipules, and the newer sertata, I believe, makes a bush of similar appearance.

For autumn effects in the Rose garden many of the rugosas are unsurpassed, their large, thick leaves turning from dark green

to the most brilliant golden and yellow tints; while the little nitida from America lightens up many a dreary day in winter by its shiny bright scarlet leaves, stems and berries.

The introduction of the Wichuraianas from China has brought a great accession of wealth as regards beauty of foliage for our pergolas and pillars. Their shining light green foliage, in some cases shaded with coppery red, is now to be seen in almost every garden, and where nearly all are excellent in this respect it is almost invidious to choose from amongst them. Shower of Gold and Braiswick Charm have small brilliantly polished green leaves very closely set together, Ariel and François Juranville are two of the best of those with coppery tints, while Jersey Beauty and Edmond Proust have the immense advantage, especially when used for a screen, of being practically evergreen.

Gerbe Rose, another Wichuraiana, is worth growing if only for its delightfully smooth, thick rods and large persistent green leaves, while American Pillar, a Wichuraiana crossed with Setigera, has perhaps the most handsome foliage of any Rose. It is large, very glossy dark green shading to deep brownish purple.

Lord Macartney's Rose, Rosa bracteata, has very distinct foliage. The substance of the leaves is wonderfully solid and durable. In a mild winter and sheltered position they persist till pushed off by the new leaves in spring.

Among the Tea and China Roses many can be found which would be well worth growing simply as foliage plants, and which also in mild winters will keep green till pruning time comes.

An old favourite the Honourable Edith Gifford makes a delightful bedding plant chiefly because its foliage is so abundant and of such a good colour.

Queen Mab and the Comtesse du Cayla are Chinas specially good in this respect, and in the autumn their reddish shoots and

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deep olive green leaves set off admirably the apricot and coppery shades of their blossoms.

Among the Hybrid Teas the semi-climber Lady Waterlow is remarkable for its handsome and abundant leafage.

Zéphirine Drouhin, the thornless Hybrid Bourbon, one of our sweetest scented Roses, has leaves which early in the season are wonderful to look at in their varied tints of green, pink and steely blue.

The only time the beds of Teas and Chinas are bare of their greenery is during the few weeks that follow their pruning in April. It is quite possible to do away with this by planting them with daffodils or tulips—in any case this bareness is soon followed by the bursting forth of the new shoots all ruddy and radiant with fresh life and vigour.

If only there were no "enemies of the Rose" we could enjoy this beautiful leafage at our leisure, but, unfortunately, directly these young shoots appear they are apt to be attacked by aphis, caterpillars and other pests, and these, as a rule, can only be kept clean by constant syringing with one of the many insecticides. The comparatively new group of Pernet Roses have good and distinct foliage, usually glossy and of a bright green, sometimes prettily contrasted with red stems and thorns. Unluckily this group seems specially susceptible to the worst of all diseases with which Rose foliage has to contend, the horrid and now, alas! too familiar Black Spot, for which an effectual remedy, so far as I know, has yet to be found. If we have only a few dozen plants we can perhaps stop the advance by rigid hand picking of every leaf which becomes infected. Where hundreds of Rose plants in the form of pergolas, pillars, bushes and hedges are grown (at any rate, in these days of labour shortage), this hand picking is well nigh impossible, and we have to resort to spraying in the same manner that we do for mildew. The Pernet groups, however, seem to be wonderfully free from mildew, on the whole, and when affected by it the flower stems

rather than the leaves frequently suffer; this is the case both with Willowmere and Madame Edouard Herriot.

Any remarks, however short and imperfect, on the subject of Rose foliage would be incomplete if mention were not made of the Sweet Briar, whose leaves "are very greene and sweete in smell above the leaves of any other kind of Rose," and which unlike so many plants with sweet-scented leaves is able to release its fragrance into the air. Finally, it is almost impossible to write of leaves, whether of Roses or any other plant, without quoting from Ruskin's "Proserpina."

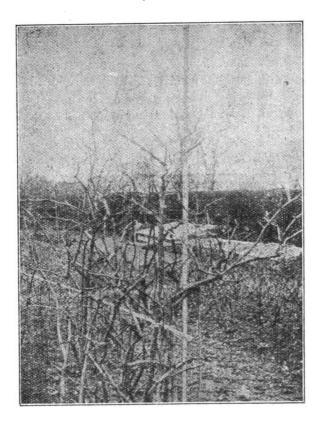
In that charming book the chapter I most often turn to is Chapter III, on The Leaf. At all times, but specially in these days, when young and lovely lives are being swept away from us in thousands, it is consoling to recall Ruskin's noble thought clothed in his incomparable language—

"Farther, the leaf, in its connection with the river, is typically expressive, not, as the flower was, of human fading and passing away, but of the perpetual flow and renewal of human mind and thought. . . . Other symbols have been given often to show the evanescence and slightness of our lives—the foam upon the water, the grass on the housetop, the vapour that vanishes away; yet none of these are images of true human life. That life, when it is real, is not evanescent, is not slight, does not vanish away. Every noble life leaves the fibre of it interwoven in the work of the world; by so much, evermore, the strength of the human race has gained; more stubborn in the root, higher towards heaven in the branch; and 'as a teil tree, and as an oak—whose substance is in them when they cast their leaves, so the holy seed is in the midst thereof.'"

ROSA RUBRIFOLIA.

By O. G. ORPEN, Vice-President N.R.S.

Not many years since considerable latitude was allowed in the schedules of the National Rose Society as to the foliage that might



R. rubrifolia.

be used in the decorative classes, they used to read "arranged with any foliage" instead of "arranged with Rosefoliage only," as at the present time.

No foliage could be so suitable as that of Roses, but the great difficulty was that the young and beautifullycoloured leaves and stems would not "stand" in a hot tent, and the decoration was soon spoiled in consequence.

As species and hybrid Wichuraiana Roses and Rosa rubrifolia became more generally cultivated, trails of these soon

proved to be very suitable adjuncts to any Roses, and I think our decorations have improved since ferns have been prohibited.

Rosa rubrifolia is not so universally grown as it deserves to be, and where foliage is admired, I know of no variety that will give more pleasure than this one. It is described in our "Official Catalogue" as "Soft Rose—stems and foliage very distinct in colour. Grown for the effect of foliage only. Summer-flowering; known also as 'ferruginea." "The flowers are insignificant, but the glaucous green foliage is quite distinct, and the deep crimson hips are very pretty and freely borne in clusters. This latter characteristic enables me to advise its cultivation on its own roots from seed.

Some, I believe, cannot get this Rose to grow freely, and I experienced the same difficulty until a chance seedling in my garden showed me that when growing on its own roots it proved more satisfactory than when budded. I have a row of plants at the present time, grown from seed, which quite commonly produce rods of 6-ft. and 8-ft., and even longer. To ensure plenty of laterals suitable for decorative use, these rods must be tied down horizontally and shortened, and the thin and old wood cut out. At the base of those laterals that make weak growth strong buds for next year will generally appear, and such laterals should be cut hard back.

The small accompanying photograph shows the end plants in a row growing in my garden in Essex, and was taken last Spring after pruning. The white pole—10-ft. long—standing in the last plant, shows the height to which one rod attained in 1915. This shoot started from the ground, and the photograph shows that it reached a height well above the top of the pole.

Note that the same of the same

ROSE PERFUMES.

By the Rev. JOSEPH H. PEMBERTON, Vice-President N.R.S.

What was it that made the Rose so popular in days gone by? Until one hundred years ago it was just a bush in the garden border, sharing it together with pinks and columbines, marigolds and lilies, London pride, love-in-a-mist, hollyhocks, sunflowers and Michaelmas daisies. In the days of Queen Anne tulips were all the fashion with specialists, but fashion is always fleeting, and that which is the rage to-day will pass away to-morrow. Other flowers have had their day, but the Rose has held its own in the face of all vagaries. And then just think of the sort of flower it was, only a century ago; a flower of June, not beyond; a flower, as compared with others, small in size, and for the most part poor in colour. What, then, was it, we ask, that made and kept the Rose a universal favourite in days gone by? Let Shakespeare reply. Whether he had a garden or not is immaterial; but this we know, that as he wandered along the country lanes it was the perfume of the flower, of the Rose, that caused him in his heart to sing: -

> "I know a bank whereon the wild thyme blows, Where oxlips and the nodding violet grows; Quite over-canopied with luscious woodbine, With sweet musk roses and with eglantine."

Yes; the delicious fragrance of the R. arvensis—the good old English musk—and the Sweet Briar won his heart, and he loved them because of their fragrance. And so it has ever been. Lest, however, we should attach more influence to fragrance than it deserves, we must not disguise the fact that the increased popularity of the modern Rose lies to a great extent in its extended flowering season, brilliancy in colouring and diversity of habit. Nevertheless, it was perfume that made it the favourite flower in its early days



MRS. C. E. SHEA (H.T.). CERTIFICATE OF MERIT, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.
Raised by Messrs. S. McGredy & Son, Portadown, Ireland.



And some folks have inherited the desire for fragrance from their forefathers; it has been bred in the bone. A few years ago, when the Rose was more or less regarded as an exhibition flower, fragrance was quite a secondary qualification of a good Rose; everything gave precedence to size and form. The exhibitor was content with his high-pointed beauties, wired up and stuck in serried rows in a regulation size box, and was in an agony when some friend, not being an expert exhibitor, but one impelled by heredity, popped his nose on to the point of the flower and sniffed. As his forbears had done so did he. Times, however, are changing; size and form are no longer dominant. We now seek for beauty in the colour and freshness of the Rose; we like to see a full-blown flower disclosing its golden stamens and anthers, and, together with all this, we seek for fragrance.

But the quest for fragrance is to some a novelty, and for this reason it may be narrow. The quest may be confined to that perfume which has been described as "the true old genuine Rose scent, such as may be found in the old cabbage, or Provence Rose, in Général Jacqueminot, Marie Baumann, Duke of Wellington, General McArthur, etc."; if so, is not our idea of Rose perfume restricted and, from the terms used above, is it not implied that the Musk Rose perfume, for instance, is not old, is not genuine? No, let us guard against narrowness. We know there is more diversity in the Rose family than in any other flower, and no one is more alive to this diversity than the amateur who cultivates his own Roses, especially when he wants to prune them. Diversity in habit, diversity in the mode of producing flowering shoots, diversity in flower development, and—let us emphasise this—diversity in perfume; and it is here wherein our discernment may perhaps be defective.

All wild Roses have perfume; distinct yet refined in some, powerful and decided in others, and almost as variable as the Rose is in colour and form. R. canina has its own perfume, so has R. arvensis; and both grow side by side in the same hedgerows. Now, how many amateurs, blindfolded, can detect the difference

between these two Roses from their respective perfumes? The eye of the Rosarian has been educated; it is alert. The Rosarian appreciates form and colour, he values the arrangement and length of stamens, the quality and brilliancy of the pollen; few, perhaps, of the general public can see what he sees. But has the training of his sense of smell, where Roses are concerned, been equally developed? That is a question. A chairman of a floral committee once observed to the writer that a certain Rose which had just received an award had no smell, whereas the musk perfume was strong, and the bees, where it grew, forsaking all other Roses in its proximity, thronged the blossoms of this Rose. But he did not profess to be a Rosarian.

We have said that all wild Roses possess fragrance—some, of course, more than others; but for the purpose which lies before us, let us confine our attention to those wild Roses from which are derived the majority of our present day perpetual-flowering varieties, namely, R. moschata, or the Musk, R. centifolia, or the Damask, R. indica odorata, or the Tea-scented and R. lutea, or the Persian Rose. In these wild Roses the perfume is pure, and for that reason we can easily detect the difference between the Musk, Damask, Tea, and Persian; but when we come to deal with the perfume of our garden Roses it is not so easy. Our garden Roses, it will be remembered, are the result of crossing one variety with another. It may be that the original parents had each a different perfume. inasmuch as we expect and generally discern the characteristics of the parents produced in their progeny, so we find a blend of perfumes. The blended characteristics which appear to the eye are soon perceived, but the blended perfumes are frequently undetected. But before going further into the subject of blends, let us first consider in detail the four chief perfumes.

(1) The Musk. Here we have a delicate and refined perfume, suggestive of heather and lime blossom. It is, moreover, diffusive. Go into the garden on a quiet day in summer; the perfume of the Musk-scented Rose pervades the atmosphere as does the lime. It



is beloved of bees, and attracts them more than any other Rose perfume. Roses with musk fragrance are generally produced in clusters, and the prevailing tone is white, or light-coloured. Seeing that some of our English wild Roses, R. arvensis for instance, are impregnated with musk, we may rightly term the musk perfume "the true old genuine" British Rose scent.

- (2) The Damask. R. centifolia, the Rose of Damascus, brought to France in the time of the crusaders, gives us the damask perfume. This fragrance is heavy, strong and positive, but not, in the writer's experience, diffusive. That is to say, this perfume does not seem to impregnate the air as does the musk; you have to take the Rose and smell it. But being so strong and positive in the individual flower, it has come to be regarded by many as the real Rose scent, and a Rose which has it not, although it may have another perfume, is apt to be deemed scentless or deficient in scent. It is from this perfume that attar of rose is manufactured—prior to the war this was a great Bulgarian industry. The usual colour of a Rose with damask perfume is red, and the flowers are generally borne one or two only on each stem. We seldom if ever find a cluster Rose having pure damask perfume.
- (8) The Tea-scented. For this perfume we are indebted to R. indica odorata. Here, again, the perfume is not diffusive—it has to be sought for in the flower itself; nor is it as definite or dominant as the damask. The pure Tea perfume is found in the older varieties of the Tea-scented Rose, especially where the colour is buff or pale tlesh.
- (4) The Persian, or Fruit-scented. Roses for the garden with perpetual-flowering habit, derived from R. lutea, a Persian Rose, are of comparatively recent introduction, and therefore their special perfume has not as yet received a popular name. May we venture to call it "Fruit-scented"? Roses of this class have all, more or less, a subtle fruity smell, one suggestive of apricot, another of pineapple. It is not at any time, however, a strong perfume, and if our sense of smell is not alert, we might conclude that Roses possessing



this perfume were scentless. This fragrance is never so positive nor dominant as that of the Musk or Damask, but in most Roses of this class it is there all the same.

Now let us attempt to classify these four perfumes described above—it is only an attempt—and at the same time indicate a few of the best examples in each class.

CLASSIFICATION OF PURE PERFUMES.

Perfume.

Species or Variety, and Habit.

I. Musk.

R. moschata nivea (M); not perpetual.
R. brunonis (M); not perpetual.
The Garland (M); not perpetual.
Seagull (M); not perpetual.

II. Damask.

York and Lancaster (the true) (D); not perpetual. Tuscany (D); not perpetual.

Marie Baumann (H.P.); perpetual.

Général Jacqueminot (H.P.); perpetual.

Sénateur Vaisse (H.P.); perpetual.

Souvenir de Pierre Dupuy (H.D.); not perpetual.

Zéphirine Drouhin (B); perpetual.

III. Tea-scented. Gloire de Dijon (T); perpetual.

Madame Bravy (T); perpetual.

IV. Fruit-scented. R. lutea; not perpetual.

R. lutea bicolor; not perpetual.

Rayon d'Or (P); perpetual.

Louise Catherine Breslau (P); perpetual.

And there are blended perfumes which, like blends of tea or tobacco, are superior to the pure perfume. The blend of musk and tea is one—to the writer the most enchanting of all the Rose perfumes—the blend of musk and damask is another. It seems, however, that the two distinct perfumes of damask and tea will not blend. We know how strong these perfumes are apart from each other, and it may be by reason of this dominancy that when they

meet the perfume of one holds up the other. At any rate, when raisers, in their efforts to obtain more free-flowering Roses, crossed the hybrid perpetual with the tea, their progeny had no perfume. Free-flowering and good autumnal Roses certainly were obtained but, for the most part, at the loss of fragrance.

CLASSIFICATION OF BLENDED PERFUMES.

Perfume.

Variety and Habit.

I. Blend of Musk and Tea. Lamarque (N); not perpetual.

Maréchal Niel (N); perpetual.

II. Blend of Musk and Damask.

La France (HT); perpetual.

Mrs. A. E. Coxhead (HT); perpetual.

Edward Mawley (HT); perpetual.

General McArthur (HT); perpetual.

III. Blend of Damask and Fruit-scented.

Juliet (P); perpetual.

And here is another point bearing upon fragrance, which an examination of the above tables of Rose perfumes will go far to prove, and that is that perfume is more or less an indication of the flowering habit of those varieties which are perpetual. In those Roses set forth in the list as good examples of pure damask perfume, are any of them free flowering and good in autumn? On the other hand, do you want Roses with a long season of flowering, the first to come and the last to go-one refers to perpetuals-is it not just those with a musk or fruit-scented perfume, either pure or blended, that we should select? Rayon d'Or, fruit-scented, flowers from early June to late September, whilst General McArthur and Mrs. A. E. Coxhead, whose perfume is a blend of musk and damask, are some of the very best of October Roses. Now with this fact before us, when we are appraising the value of a new Rose, we take particular notice of perfume, however faint it may be. If we discover from its perfume that the Rose has a strain of musk or fruit scent, we have ground for believing that it will be free flowering, and good in autumn. And on the other hand, if the new Rose has pure damask fragrance only—delicious though it may be—we may rightly conclude that it will not have a long season of flowering. Of course, there are other signs besides fragrance that indicate the musk or any other strain in a Rose, but these are not now before us; we are dealing with fragrance.

In offering these brief notes for consideration the writer begs the reader to accept them simply as the writer's own private opinion based upon personal observation; he would be the last to be positive on any matter connected with the Rose. They may, however, be helpful to others to discern—if they have not already done so—in this, the most lovable of all the flowers in the world, that beyond diversity in habit of which we are all aware, there is perhaps even more diversity in Rose Perfume.





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HIPS OF R. MOYESii.

THE SPLENDOUR OF THE ROSE HIP.

By J. K. RAMSBOTTOM.

Among the myriads of books and articles which have been written upon the subject of "Roses" one rarely sees reference made to the beauty of the Rose hip, so that I am tempted to write a little of their value in garden scenery. It appears that many Rosarians are not aware of the additional charm to be obtained from growing Roses for their hips in order to provide cheerfulness to the garden from the time the last "H.P." drops its petals until the bright days of spring. Speaking generally it is on the species that hips are borne, and the popular conception of a species is a weed, and to write of species is to frighten the amateur Rosarian, who conjures up visions of dry botanical details that will only interest the man who dives deeply into the subject he has at heart. There are, however, the species of Roses that range from cold to warm countries, dwell at high and low altitudes, and gem the earth with colour both in flower and fruit; and there are some of us who realise that there are many of these Roses that have a great charm for those who desire beautiful gardens. We hear much of individual exhibition blooms, and this is quite right, but it is only within recent years that a thought has been given to the foundations of the many sections we at present possess. Some of these, besides blossom, have two other phases of beauty-leafage and berry; some fitted for the rockery, such as the glossy leaved Rosa lucida and R. alpina, others for the wilder parts, as R. rugosa, a delightful bushy Rose, never ceasing to bloom through the summer, scenting the garden with a rich fragrance and colouring it with scarlet fruits in the late days of autumn. It is not my intention in the present article to touch or trespass on matters cultural, nor shall I endeayour to treat of the botany of the Rose, or of its history; but I desire

to bring forward the species as plants that have a great claim to respectful consideration on account of the splendour of their hips.

Rose hips vary much in shape, colour, and size, and in the freedom with which they are produced, so that with a reasonable selection it is possible to have a charming display throughout the "dead" season of the year, and opportunity is afforded to those who wish to create new and original features in their gardens.

Mention has already been made of R. rugosa, and to my mind it takes high place among scarlet fruited Roses. It needs no description, and a glance at the numerous varieties proves that it has not been unheeded. As a hedge plant it has a claim to consideration, and also as a spreading bush on the outskirts of the lawn, where the ruddy fruits, produced in abundance, give cheerful colour when the leaves put in their autumn tint. This species also figures as a parent in many hybrids, one of which I should like to draw attention to—namely, R. calocarpa (derived from R. rugosa and R. indica); the fruits are not so large as in the first-named parent, but they are produced in such abundance as to recommend it a place in every garden. In shape they are globose, the colour being a rich scarlet.

Another very pretty Rose is R. alpina, cultivated in England since the latter part of the seventeenth century, and known at times as "the Rose without a thorn." It is one of the few species perfectly at home in the rock garden, and is particularly striking when in fruit. The hips are narrowly pear-shaped, bright red, and surmounted by erect, persistent sepals, and being freely borne they afford a cherished colour effect, glorious, unique, and unusual—more's the pity! In the autumn of last year I was very much impressed with the fruiting capacities of R. lucida, which I believe appears also under the name of R. virginiana; the leaves of intense crimson set off with chocolate and the orange-shaped fruits of richest crimson, a rich association of colour that on an autumn day is a picture of beauty. The hips hang all the winter, the leafless shoots assume the colour of sealing wax, and throughout the dullest

months of the year a mass of this Rose is very effective. Even more brilliant in colour is R. Fendleri, the fruits being somewhat larger, the hanging masses making a distinct impression on the garden scenery.

Distinct in the production of tiny hips is R. pisocarpa, which, as the name implies, carries fruits no larger than a pea. Gathered in the Upper Sacramento Valley, seeds of this species were sent home by Sir Joseph D. Hooker in the year 1877. Its growth is straggling and slender, but its bright red fruits give life to the garden in the autumn and winter. The small leaved R. macrophylla is most distinct on account of its rose-pink flowers being succeeded by spiny apple-like fruits that are eaten as apples by the Japanese. It is most beautiful in berry, yellowish green in colour and very fragrant. R. rubiginosa, the sweet briar, is also very handsome in fruit, of bright red colour, egg-shaped, and crowned with persistent spreading sepals.

The apple-fruited Rose, R. pomifera, is described by Parkinson (Paradisus, 418) and competes with R. rugosa in respect of the splendour of its fruits. Of it Parkinson says: "The whole beauty of this plant consisteth more in the graceful aspect of the red apples or fruit hanging upon the bushes than in the flowers, or any other thing."

The Ayrshire Rose, a hybrid of R. arvensis, which clambers over everything that comes in its way, is of exceptional value on account of its hips which, although small, are none the less attractive, and are produced in such profusion that autumn is by no means the least showy period with this beautiful Rose. R. acicularis is well worthy of cultivating in semi-wild positions for its abundant red hips, which are pear-shaped and about one inch in length, while the true R. macrantha (not R. Duponti, which is often sold as such) well repays for its cultivation when consideration is taken of the beauty of its orange-red berries. Black-fruited Roses include R. altaica and R. Hugonis. The former is pretty in leafage, and carries its fruits in great quantity. A robust Rose, and one worthy of cultivation, if

alone for its fruits, is R. Soulieana. The egg-shaped hips assume a rich colour in autumn, and may be described as orange-red in shade. R. nitida, a charming Rose in fruit, is also worthy of a place in every garden, for after the bright red leaves fall it is still attractive on account of its scarlet globose fruits.

Lastly, R. Moyesii, which I think is gaining as much popularity for its fruits as for its flowers, is beyond doubt the Rose hip par excellence. Of a dull red colour, the fruits take the form of a bottle, about one and a half inches in length, and are crowned by persistent sepals, beneath which is a distinct neck. Many H.T.'s and Wichuraiana Roses also provide hips of much beauty, but it is not my intention to deal with these in the present article.

It is gratifying to note that the National Rose Society has not left the Rose hip unheeded, for it now provides classes for fruiting sprays of Roses in the amateur and professional sections of its autumn exhibition. Moreover, these classes since their introduction have never been uncontested, and considering the interest which they cause to the true Rosarian, their introduction will do much to advance the Rose hip as a means of providing cheerfulness to the garden at a time when colour is most needed. I should, however, like to see our Society go one step further and introduce a class. or classes, to illustrate the use to which the Rose hip may be utilised for table decoration and for vases. Such classes are quite feasiblein the autumn show, and if a rule were made stipulating that the exhibitors arrange their displays in such a manner as might be expected at the Christmas table, the decorative skill of the competitors would be put to a sure test. It is during the autumn and winter months that one has to depend mainly upon the chrysanthemum for indoor decoration, but as much pleasure is to beobtained from sprays of Rose hips suitably arranged with branchlets. of conifers, pittosporum, azara microphylla, coloured ivies and other evergreens, which remain in beauty for many weeks and providea decorative effect seldom to be exceeded at this time of the year.

Thus, these few notes have been written to help forward the species of Roses cultivated for their hips, and to encourage gardeners to find them a place in those gardens in which the ideal of all Roses is the exhibition "hybrid perpetual." Should any reader doubt that splendour is not to be found in the Rose hip, I can only suggest that a visit be made to the Royal Gardens, Kew, where a large collection of Rose hips will be found in autumn and winter. After visiting this "temple of horticulture" on a bright, crisp October day, I feel fully satisfied that the Rose hip is one of the fairest products of the garden, and if I can persuade my readers to take the same view, the object of this article will be accomplished.



DECORATIVE VALUE OF ROSES.

By FRANK CANT, Vice-President N.R.S.

Decorative Roses for growing in beds, each bed containing only one variety, require qualifications entirely different from those which produce large exhibition flowers, and are grown mainly for the purpose of winning prizes at exhibitions during late June and early July. After that period the plants are very often left to their own devices, and disbudding and thinning out the shoots is forgotten, or, at all events, left undone, the result being that strong shoots spring up from the base of the plant, carrying numerous buds, few of which open properly, unless three-fourths of the lateral buds are removed. Of course there are exceptions to the rule, Hugh Dickson is a notable example, but in the case of the majority of exhibition Roses, the terminal flowers are so closely surrounded by lateral buds that there is little or no decorative effect, unless disbudding and thinning out the superfluous buds is frequently done throughout the summer and autumn. I may be considered a heretic for making such a statement, but nevertheless it is true, and I quote Frau Karl Druschki, Mrs. Theodore Roosevelt, Bessie Brown, Gloire de Chédane-Guinoisseau, Ethel Malcolm, Edward Mawley, Ulrich Brunner and J. B. Clark as examples of varieties giving a superfluity of useless buds, and I often wonder why Nature thus appears to defeat her own object, unless it is to provide work for human hands. If, therefore, the decorative effect in the garden is to be the principal object in view, when planting such varieties as those before named in beds for decorative purposes, one must take into consideration the question of disbudding, cutting out the lateral buds where they are too thick, and this drastic measure must be put into practice.

The word decorative, when used in connection with Roses, means much to those who really grasp the meaning it is intended to convey.





FRANK CANT, Braiswick, Colchester. Elected Vice-President N.R.S., January, 1917.



As I understand it, a Rose which answers that description is worthy of being planted in a bed in company with no other variety, and is in bloom during the entire summer months, from early June until late November, or even until Christmas in the absence of frosts. There should be no need for disbudding or thinning out any of the shoots, excepting those which are gathered for the purpose of beautifying the interior of the owner's residence. The position usually allotted to beds of decorative Roses is prominent, and is generally visible from the principal windows; it is therefore obvious that only truly perpetual-flowering varieties, and those producing flowers on long stems, which when cut are adapted for vases and table decoration, should be employed. Freedom and continuity of flower is essential, and those sorts only are suitable which throw up strong shoots from the base, bearing several buds—but not too many -so that after the terminal flower has fallen, there are other buds to follow opening in succession. Such a shoot as I have in view will produce flowers for ten days or a fortnight, and by the time the last flower has fallen, other strong shoots are in various stages of development, to produce successional trusses of bloom, and so on ad infinitum. The defect, if I may say so, with many of the decorative Roses is the superfluity of flower buds, and unless some of these are removed in the early stages of development, the terminal flowers do not attain the stage of perfection desired. What a pity there are not more decorative Roses of the habit of growth and flowering properties of General McArthur, Ecarlate, Lady Pirrie, Mrs. Alfred Tate, Lady Hillingdon, Lady Roberts, Irish Elegance, Betty (if she were not so shy and would hold her head up), Mrs. Chas. E. Pearson, Mrs. Waddell, Arthur R. Goodwin, Louise Catherine Breslau, Carine, Little Dorrit, Warrior, Le Progrès, Mme. Abel Chatenay. Mélanie Soupert, Mrs. Aaron Ward, Theresa, George Nabonnand. and others, which are "star gazers" and not "nodders"! these Roses are quite hardy, free and continuous in blooming, not impatient of wet, and practically free from mildew (the enemy pest among Roses), and if given a fair chance in regard to soil and situation, will continue in bloom from early June until December. What more can the most exacting expect of a Rose? When we look back thirty to thirty-five years (and I am as sorry for those who are able to do so as I am for myself), it is reflected in our memory that amateur Rose gardens were then in a very elementary stage. The custom was to plant many varieties of Roses strangely different in their habit of growth, divergent manners, period of flowering and variety of colours, all in the same bed; it was not unusual to find Horace Vernet, François Michelon, John Hopper, Marie Baumann, Merveille de Lyon, Dr. Sewell, Victor Verdier, Mrs. Baker, Souvenir de la Malmaison, Sir Garnet Wolseley, Général Jacqueminot, Mme. Nachury, Céline Forestier, Sombreuil, Souvenir d'Elise, Homère, Devoniensis, Duke of Edinburgh, Baroness de Rothschild, all planted in one bed, mixed up like the ingredients of a Christmas pudding.

The varying habits of growth and the colour of the flowers were disregarded; all, however, were manured in the same manner, and all were pruned alike, the result being anything but uniformity of growth and flowering period, and after a year or two the stronger and taller growing varieties asserted their supremacy and smothered the dwarf growers. As time passed the short growers died for want of light and air, and with such a selection the decorative effect can better be imagined than described. But this is a world of changes, the method of selection and planting has been revolutionised, and the public taste and cultured eye demand something which at once attracts, and is pleasing to view. Fashion may have something to do with it (but I think not), for I know of no flower which is less. subject to fashion craze than the Rose, and I may say without fear of contradiction that down to 1914 there never was a time when the Queen of Flowers had reached the apex of popularity. At the time of the outbreak of war the producers had never been more prosperous. and the owners of large or small gardens never happier. They had time and leisure to enjoy all the attributes of their Queen in their own gardens, and where could greater happiness be found? They had the hope of infinite pleasure in watching the development of their growth and flowers. They looked forward to learning the name of this red Rose or that yellow one, and fixing it in their encyclopædia, and they thought with pride of conveying their know-



MRS. C. E. SALMON (H.T.) CERTIFICATE OF MERIT, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.
Raised by Messrs. Frank Cant & Co., Braiswick, Colchester.



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ledge to some friend, and of making another convert to the Rose. The Roses are still there, but alas! many are no more who planted them. Many of these brave men have laid down their lives for their country, and will never see the result of their loving labours at home. We lament their loss, and shall ever be grateful to them for having saved our country from an unscrupulous foe. The Rose world is poorer for their absence. A friend who can never be replaced has gone. For the widow and family the memory of that last Rose bed which he planted will never die, and loving devotion and unselfish attention will be showered on the plants as living tokens of him who is missing.

I cannot conclude these few notes without a short reference to our esteemed and much-loved old friend the late Mr. Edward Mawley, with whom it has been my privilege to be associated for over thirty-five years. During that long period, which was one of devotion to the National Rose Society, I always found him the same. He was genial, kind, generous, thorough to a degree, even tempered, dignified always, and in all things just the type of an English gentleman, not learned by a long life but nature's gift. We shall miss him!

ROSES ON WALLS.

By EDWIN MOLYNEUX, V.M.H., Swanmore House Farm, Bishop's Waltham.

The advantage of a high southern wall is that many varieties of Roses of quite exceptional merit can be cultivated successfully on such a site, whereas without the shelter afforded by a wall these Roses are entirely lost, because they cannot be grown satisfactorily in the open; they seem to need additional warmth, and of course proper treatment as well.

To secure success the preparation of the soil is an important item to consider, and good drainage is essential, especially where the soil is heavy in character. Although Roses revel in abundant water supplies at various seasons they cannot withstand a waterlogged condition about the roots. The soil, whatever may be its character, should be stirred to the depth of 3-ft., and where clay or a close approach to it is found, drainage in the shape of broken bricks or clinkers should be provided at least 1-ft. thick. This will ensure perfect drainage. Any stiff garden soil, if it be enriched by the addition of half-decayed farmyard manure in liberal quantity, will suffice to grow any variety of Rose satisfactorily, provided the other conditions are suitable. It is important to supply the roots freely with moisture during a dry spell of weather, especially during May, June, and July, and to this should be added occasional doses of weak liquid manure. Another important item in good cultivation consists in syringing the foliage in the evening after a hot day. Again, the checking of insect pests, as aphis especially, is too often neglected, whereas a timely washing of the leaves with an approved insecticide would check the increase of insect growth and give to the foliage a healthy appearance. The most easily applied and one of the most efficacious remedies



A FINE SPECIMEN OF THE GARLAND (H. MUSK), AT GT. STAMBRIDGE RECTORY, ROCHFORD.

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I know is McDougall's "Katakilla" powder mixed as advised on the packets, always using rain or softened warm water to mix with the powder. Planting is best done at the end of October. The following March the plants must be cut hard back in order to ensure a thorough foundation of growth near the base of the plant; even if a loss of flower is the result for the first year, the plants will make all the stronger growth and flower freely afterwards. The following are suitable varieties, all possessing much merit in their own way:—

Reine Marie Henriette is commonly known as the red Gloire de Dijon; it was sent out by Levet in 1878, is one of the first Roses to flower, and therefore desirable.

Gloire de Dijon is a Tea Rose—very sweetly perfumed, hardy, continuous, and free flowering; it succeeds in any aspect; the colour is buff with an orange centre. This Rose was introduced by Jacotot in 1850.

Mme. Alfred Carrière is a hybrid Noisette, sent out by Schwartz in 1879; it is one the earliest climbing Roses to open its blossoms, which are produced profusely; the growth is vigorous, and quickly covers much wall space. It is a good variety for an eastern aspect; the colour is white, tinged with blush.

Céline Forestier belongs to the Noisette section; it has rich sulphur-yellow blossoms, which are freely produced, especially on a south wall.

Cloth of Gold is a Rose possessing a colour almost unique—sulphur-yellow with a deep centre—and like Céline Forestier should have the aid of a high south wall. Although this Rose was introduced as long ago as 1848 by Coquereau, it is seldom seen owing to its sparseness of flower in the open. The wood requires roasting on a south wall to bring it to sufficient maturity to enable it to produce a full crop of blossoms.

Rêve d'Or is a charming Rose, with its copper-tinted foliage, which associates well with the yellow apricot-tinted blooms, which are produced in huge clusters. When once the desired space is covered a system of close spur pruning should be adopted to obtain a full crop of flower. This is an old Rose introduced by Ducher in 1869.

Aimée Vibert, in its dwarf form, was sent out by Vibert in 1828, and the climbing variety by Curtis in 1841. It belongs to the Noisette section, and produces its pure white blossoms in huge clusters, continuing to do so well into the autumn. This, combined with its almost evergreen foliage and freedom of growth, renders it valuable for covering any wall, other than that with a northern aspect.

Isabella Sprunt belongs to the Tea scented section; it has deep canary-yellow blossoms appearing quite early in June, and on a west aspect quickly covers a wall 15-ft. high.

Ards Rover, for a low wall, say 4-ft. to 6-ft. high, is a gem, flowering very profusely quite early in the season. The crimson flowers shaded with maroon are most fragrant. When the allotted space is covered a close method of spur pruning should be adopted to obtain the best results.

Blush Rambler, one of the newer of the rambling or multiflora varieties; it is excellent for a wall; its bright green foliage adds considerably to its appearance, and this, coupled with its vigour and the huge clusters of its blush-coloured single blossoms, which are freely produced, makes it a highly attractive feature in the garden.





VIEW IN MR. C. B. WORSEY'S ROSE GARDEN.

ROSES NEAR A MANUFACTURING TOWN.

By CHAS. B. WORSEY, Edgbaston, Birmingham.

My garden is situated only two miles from the centre of Birmingham and about two or three miles from the Black Country, not an ideal place for growing Roses, but with much care and attention I have achieved some measure of success, quite enough to repay me for the trouble taken.

In its design the garden is arranged with grass walks dividing the beds, which are made a suitable width to permit working without treading upon them. I commenced some years ago with one bed of Roses, but year by year I have taken more of the garden for Roses, until now it contains practically nothing else, and provides room for about 3,000 plants.

Each bed is either devoted to one variety only, which is the best way to plant when space permits or a selection is made of varieties similar in colour and habit of growth, as this is better than mixing the colours.

The Roses which grow most satisfactorily with me are nearly all Hybrid Teas of the decorative class, and just a few Hybrid Perpetuals and the stronger growing Teas; these give a continuation of bloom from June to the end of October.

Ramblers are grown on pergola, arches and as weepers. Climbing Roses are trained over the wooden trellis on the walls surrounding the garden, on which I find they do much better than when nailed to the walls; this method allows a free circulation of air and

is more convenient for tying in the growths. This trellis is made of split fir poles fastened about six inches from the wall; a 12-foot pole is erected every 16 feet, up which is grown a Rambler, with a Climbing Rose between.

Making the Beds.

The beds are dug out to a depth of about 3-ft., replacing the worthless soil with loam from an old pasture. When making the beds I put in several layers of well-rotted horse and cow manure, and use some basic slag and ½-inch bones at a suitable depth. A little bone meal is used to each plant when planting. The beds are surfaced with two or three inches of fine soil in order to facilitate hoeing.

Cultivation.

In February I fork into the beds a good top dressing of well-rotted horse and cow manure. From April until the end of July I occasionally give a good soaking with weak liquid manure and soot to established Roses after rain or watering. Towards the end of July after the first crop of blooms I give the beds a dressing with Clay's fertilizer, at the rate of 1 oz. to the square yard, to assist the second crop. I find that a dressing of basic slag in November does good. Hoeing fairly deeply I consider most important; this is done every week during the season.

I syringe regularly, commencing early, for the prevention of mildew and keeping down green fly.

Rose grubs and caterpillars are picked off by hand. Disbudding is done regularly.

The following are the Roses I find most satisfactory:—

Pinks (various shades).—André Gamon, Countess of Shaftesbury, Dorothy Page-Roberts, Dorothy Ratcliffe, Gustav Grünerwald, Lady Alice Stanley, Lady Ashtown, Caroline Testout, Mme. Edmée Metz, Mme. Maurice de Luze, Mme. Segond-Weber, Miss Cynthia Forde, Mrs. George Shawyer,

Mrs. Joseph H. Welch, Mrs. John Laing, H.P., Mrs. R. G. Sharman-Crawford, H.P.

Reds and Crimsons.—Avoca, Florence Haswell Veitch, Gruss an Teplitz, General McArthur, George Dickson, J. B. Clark, Lieutenant Chauré, Richmond, Captain Hayward, H.P., Fisher Holmes, H.P., Hugh Dickson, H.P.

Yellows (various shades).—Duchess of Wellington, Gustave Regis, Mabel Drew, Mélanie Soupert, Mme. Ravary, Lady Hillingdon, Sunburst, Louise Catherine Breslau.

Coppery Shades.—Betty, Lady Pirrie, Mme. Abel Chatenay, Juliet, Mme. Edouard Herriot.

Light Shades.—Antoine Rivoire, Florence Pemberton, La Tosca, Mme. Léon Pain, Joseph Hill, Paul Lédé, Mrs. Aaron Ward, Amy Hammond, Mrs. Chas. E. Allen, Pharisäer, Prince de Bulgarie, Viscountess Folkestone.

White and Lemon.—Frau Karl Druschki, Mrs. David McKee, Molly Sharman-Crawford, Mrs. Herbert Stevens.

Of the Ramblers I grow on pergola, arches, poles and as weepers on at least six feet standards, the following do well:—

American Pillar, Albéric Barbier, Aviateur Bleriot, Dorothy Perkins (pink and white), Excelsa, Hiawatha, Jersey Beauty, François Juranville, Lady Gay, Lady Godiva, Léontine Gervais, Minnehaha, René André, Shower of Gold, Tea Rambler.

Of the Climbing Roses I grow on trellis and poles the following are good:—

Bouquet d'Or, Ards Rover, Conrad F. Meyer, Climbing Mrs. W. J. Grant, Climbing Caroline Testout, Wm. Allen Richardson.

The China and Dwarf polyantha Roses are planted in separate beds each containing one variety and colour, and they flower continuously all the season.



HOW TO MAKE ROSE PERGOLAS AND ARCHES.

By WALTER EASLEA, Member of the Council N.R.S.

The word pergola has become so fashionable that one must be pardoned for employing it in dealing with covered walks of Roses. Strictly speaking, connected arches would be a far more suitable term, for I can conceive of nothing more ugly than a true Italian pergola erected simply for Roses. I have seen hideous structures of brick and stone in most incongruous positions, with a poor attempt to clothe and hide its ugliness with fast-growing creepers.

Those who have travelled in Rome, Naples and Florence, and have seen the stately structures with massive columns of stone clad with Banksian Roses, vines, passion flowers, clematis and other climbing plants, may desire to have a similar structure in this country, forgetting that, unlike Italy, we are rarely favoured with glaring sunshine and mild winters, that are favourable to the somewhat tender subjects that are employed by the Italians to clothe their pergolas, and that we have no necessity to erect pergolas to shield us from the scorching sunshine that render these covered walks so refreshing to the inhabitants of more sunny lands. Nevertheless we can, with all good taste, erect adaptations of the Italian pergola, especially if our object be to form a support for many lovely creepers other than Roses.

When we come to erect a pergola for Roses only, our difficulty commences, for if great care be not exercised these charming flowers may only be seen from elevated positions. I have seen the massive pergola at Warley Place, and it is a fine structure, built to last for many years; but the majority of the blossoms are out of view. except from the windows of the mansion. When it is a question



LITTLE MEG (HY. POLY. POM.). CERTIFICATE OF MERIT, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.
Raised by Walter Easlea, Eastwood, Leigh-on-Sea.

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of possessing a covered walk leading from one interesting part of the garden to another, one would not confine oneself to Roses, but beautiful foliaged creepers should enter largely into the scheme, and our object of shade will be obtained.

As this book is a Rose journal, I have approached the subject from the Rosarian's point of view, so that my suggestion would be to erect a series of connected arches rather than a true pergola. A fairly good representation of such arches may be seen near the rock garden at Kew. Here are strong pillars of iron connected by chains, and in many instances a fine display is produced by the various Roses, but there are blemishes owing to the planting of varieties quite unfitted for the purpose of rapid growth. I do not care for the bare iron for Roses. If, in order to secure strength, iron must be employed, then I would suggest placing against the iron some oak posts of slight thickness with the bark left on, so that we may obtain a rustic appearance and at the same time prevent winter injury to the shoots, by frost acting detrimentally upon the growths that come in contact with the cold iron. There can be no objection to a few oak posts placed along the sides between the uprights in order to support some few growths; but personally I would not have them, simply because they would tend to obstruct the view from the various arches. I consider the uprights should be at least 15-ft. apart, and the walk fully 10-ft. wide—more if possible. The prodigious growths of present-day ramblers could then be controlled.

As I hinted before, strength and stability are very essential, especially in a wind-swept garden. One of the simplest methods I have met with was to use gas piping for the uprights. These were placed into 4-inch drain pipes let into the ground, and set up on end, and the drain pipes filled with cement. The oak posts could then be attached without placing them in the soil, simply by securing them to the gas piping. Chains or stout fishing rope could be used to span the walk as soon as the Roses required such support. As the Roses develop they can be opened out to the right and left

by means of a few light bamboo canes, and the arches may be connected lengthwise by similar material, the whole forming a light but efficient structure for displaying the Roses.

Individual arches may be constructed on the same plan, and appear more in harmony with the garden surroundings than the ugly wire creations so often met with. Similarly an arbour, or covered seat, may be provided. All entrances to a Rose garden should have arches. They hide the hard lines of entrance with glorious blossom and beautiful foliage.

Preparing the Soil.

The careful preparation of the soil is always insisted upon when beds or borders are to be planted, but such insistence should be doubly given where rambler and climbing Roses are concerned.

I met with an excellent instance not long ago of the effect in rapid growth that was produced by liberal preparation of the soil. The gardener, who was always thorough in what he took in hand, gave a good cartload of new soil for each Rose, having had very large holes opened in readiness.

The growth in two years was marvellous. This gardener required tall pillars. Therefore he cut out young larch trees, which remained some 15-ft in height after they had been placed in position, and the second year some of the Roses had reached the top of the poles. Ten feet in height is generally ample for arches, but the freer the growth the more splendid will be the blossoming.

Basic slag should be given to the lower soil at the rate of 6 or 8 ounces per square yard, and, of course, good, well-decayed farmyard manure should be liberally applied at least 2-ft. 6-in. below the surface. I would even go down deeper than this if the subsoil be good.

Should the subsoil be gravelly or sandy, it would pay to import good loamy soil to take its place. If the roots of Roses can dive well down into a good larder, there will be luxuriant growth and





A Rose Pergola in Mr. C. B. Worsey's Garden at Edgbaston, Birmingham.



highly developed clusters of blossom. Some individuals imagine a rambler to be such a vigorous grower that it is able to look after itself; but there is a vast difference in the result when careful preparation is made, for luxuriant growth means largely immunity from insect and fungoid foes.

Having thus far considered the erection of the semi-pergola and arches and preparation of the positions, a few suggestions as to varieties will no doubt prove useful to some readers.

Those who now propose erecting pergolas and arches have a great advantage over gardeners who have pergolas already established, because they can select the newest and best kinds, while it is obvious that old-established ramblers cannot well be scrapped as easily as can bush and standard Roses.

Personally I should not hesitate to root out an old variety if I were convinced a much better kind existed. In the early days of pergolas everyone planted the Three Graces, Aglaia, Euphrosyne and Thalia, also the old Crimson Rambler and Dorothy Perkins; but we can do without all of these to-day. Aglaia is very fine, but it almost needs a garden to itself, and it is very shy in blooming until established three or four years. I would rather plant Shower of Gold or Source d'Or.

Euphrosyne is superseded by Grafin Ada Bredow, a delightful variety at present little known; and certainly Sanders' White is superior to Thalia; in fact, it is the finest white rambler that has appeared down to the present, having foliage as glistening as Albéric Barbier. Then, surely, Excelsa, or Troubadour, are far ahead of the old Crimson Rambler, and Chatillon Rambler will, I think, surpass Dorothy Perkins. Of course, this latter is a good autumnal; it is also good in its freedom from mildew, and what is more, it is found everywhere, and is something like a beautiful melody strummed constantly on a barrel organ, creating a distaste that is perhaps but natural.

I propose giving a list of what I would plant upon a series of connected arches to form a Rose pergola of about 226-ft. in length; but before so doing would first say that much depends upon individual taste. Some may prefer one variety only on one arch, that is, one plant of the same variety on each side. Others, again, may prefer as much variety as possible. Again it may be desirable to have Roses on a given length to bloom all together; while others may prefer to plant an early bloomer to be followed by a late bloomer next to it, so that the pergola will be interesting from May till September. I also find a growing antipathy to the so-called ramblers, many preferring the large flowered type of climbing Rose, forgetting very often that they miss in such Roses the glorious, if fleeting. effect given by the ramblers. Undoubtedly the small villa gardens can be overdone with ramblers if they lead to the exclusion of the more perpetual flowering climbing Hybrid Teas. These latter are increasing in number each year, and even the exhibitor is glad to go to his arches, pillars or walls occasionally for a show bloom of Climbing Mrs. Grant or an Avoca, or even a J. B. Clark and Hugh Dickson, for surely these grand Roses are more fitted for pillars than for growing as bushes!

Although the so-called ramblers are frequently most embarrassing to the amateur by reason of their stupendous vigour, there is no reason why they should be so. The secateurs and knife judiciously employed will rectify all errors in this respect. The grand pot-grown specimens we see at the Chelsea Show usually carry but three or four well-ripened growths of the previous year, and we may have the same effect from our arches by severely eliminating the old wood at the proper time, which of course is soon after their summer flowering. Not only are our arches rendered less cumbersome, but the trusses of blossom are of superior size, and the quality is of the best.

It should not be overlooked, moreover, that Roses on arches, pillars or walls pay for generous feeding. It is not sufficient to prepare the positions well, and then leave the Roses to look after-

themselves. A good soaking of weak liquid manure at frequent intervals from May onwards will work wonders, not only by imparting good quality to the trusses or clusters of flowers, but also in aiding the foliage by improving its texture to ward off insect and fungoid attacks.

A word of caution is necessary to the novice in selecting ramblers for outdoor display, and that is not to be deceived by the novelties often exhibited at the spring shows. These pot-grown plants are not only highly cultivated, but their colours are totally different from that obtained when the plants are grown under natural conditions.

I am certain we do not employ the grand old hybrid perpetuals so much as we might do to clothe the uprights of some of our pergola supports. They could well be introduced with great benefit. Many of my readers must have noticed cottage walls covered in June time with old Général Jacqueminot, Ulrich Brunner, Dupuy Jamain, Duke of Edinburgh, Mrs. John Laing, Charles Lefêbvre, Jules Margottin, John Hopper and others like them, and the lovely Hybrid Noisettes, such as Boule de Neige and Coquette des Blanches. I remember seeing on a cottage wall at Warley a grand plant of Gloire Lyonnaise, an Hybrid Tea, of course, but no good for autumnal display. It is, however, a splendid pillar Rose, and should be introduced where possible. In fact, the varieties one could profitably utilise makes one desirous of planting a mile of such arches and pillars, rather than a few hundred feet or yards. If I am tempted to covet other people's land, it is when I travel through some of the noble parks of our country and realise the possibilities of the long vistas there seen if they were planted with glorious Roses.

In my own Rose gardens I have a walk some 600-ft. long, and I have planted 250 different varieties, many of them ramblers, for I usually put out the novelties to test them, some as pillars, others as shrub Roses; and this walk is a real delight to me, for there is always something interesting in blossom from May to October.

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In the following list I have given distinct varieties for each upright, but, of course, the reader may choose for himself whether to have two of the same kind opposite one another.

I have also marked with an asterisk the best kinds for the information of the novice and those who cannot plant on such a grand scale as 226-ft. Again it will be quite possible to plant between each set of uprights a shrub or pillar Rose which will help to beautify the Rose walk for a few years whilst the arches are developing, and they may afterwards be removed if necessary.

Selection of Thirty Varieties.

Arranged alternately, early and late flowering.

If it is desired to have arch all of one variety, one can be climinated.

The novice would do well to select those varieties marked thus *

In like manner these special varieties should be planted where such a lavish plantation as I have indicated is not possible.

Left Side of Arch.	Left	Side	of	Arch.
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*Albéric Barbier
*Excelsa
*René André
Evangeline
Jersey Beauty
*American Pillar
Carmine Pillar
Edgar Andrieu
*Shower of Gold
*Hiawatha

Grafin Ada Bredow
*Sanders White
Tausendschön
*Blush Rambler
*François Guillot

Right Side of Arch.

Gardenia
*Troubadour
*Léontine Gervais
Débutante
Joseph Billard
*Newport Fairy
*François Juranville
*Sodenia
Source d'Or
*Minnehaha
*Tea Rambler
Silver Moon
*Christine Wright
Chatillon Rambler
Joseph Lamy

Additional varieties recommended: -

Early.

Edmund Proust
Gruss an Zabern
Jules Levacher
Miss Hellyett
Mme, Alfred Carrière
René Danielle
Perle vou Wienerwald
Gerbe Rose

Jessica
Ruby Queen
Miss Hellyett
Aviateur Bleriot
Sweet Lavender
Jules Levacher

Late.

Flora Bennett's Seedling
Climbing Caroline Testout Gruss an Freuendorf
Rêve d'Or Félicité et Perpétue
Dr. Van Fleet Lady Godiva
Desiré Bergera Climbing Mrs. Cuthush
Ethel Climbing Orleans

To add to the interest of the Rose walk I would suggest a pillar, or shrub, Rose between each pair of uprights.

The following pillar Roses can be recommended:—

*Ards Rover Lady Waterlow *Climbing Lady Ashtown Aimée Vibert Mrs. Grant Lina Schmidt-Michel Rosalie Wrinch Chatenav Mélanie Soupert Noëlla Nabonnand Paul Lédé Sarah Bernhardt Richmond Cupid Liberty Una Sunburst *Conrad F. Meyer *Dr. Rouges *Nova Zembla *Francois Crousse *Zéphirine Drouhin Grafin Marie H. Chotek *Hugh Dickson J. B. Clark Johanna Sebus Lemon Pillar *Gloire de Dijon

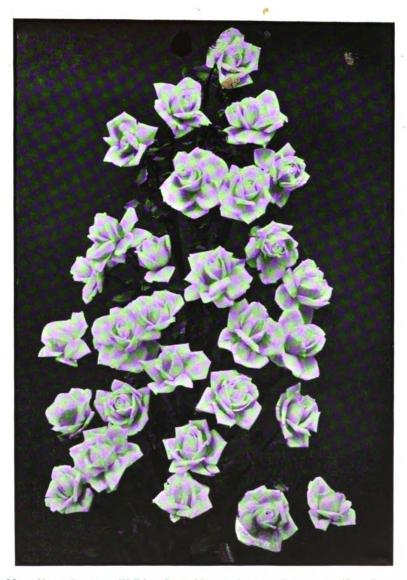
And the following shrub Roses: -

Mlle. de la Vallette Papillon *Lady Penzance *W. A. Richardson Anne of Geierstein Movesii *Irish Elegance Gloire des Rosomanes (Tate's Variety) Irish Fireflame Schneezwerg Simplicity Moonlight Adrian Riverchon *Danäe *Gustave Régis Ulrich Brunner Trier *Mme. Jules Bouché Clytemnestra *Common Monthly Juliet *Comtesse du Cayla Scotch Roses, Moss, etc.

Instead of these pillars and shrubs, some readers might perhaps prefer rows of polyantha pompons, one colour between each set of arches. For some years they would be gay throughout the summer, at least until such time as the ramblers overshaded them too much

I am convinced a Rose-covered walk planted upon the lines indicated would be a most delightful feature to any garden; and if it can be planted the length described, it would be a never-failing source of delight.





MRS. HUGH DICKSON (H.T.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.

Raised by Messrs. Hugh Dickson, Belfast.

ROSES IN WATER-LOGGED GARDENS.

By H. OPPENHEIMER, Loddon Acre, Wargrave, Berks.

Novices in the art and science of Rose culture naturally turn to the writings of experts for information as to the best methods to overcome their difficulties. On many subjects we shall find ourselves perplexed by differences of opinion, but on one point all authorities are agreed, viz., that adequate drainage, either natural or artificial, is indispensable to the successful cultivation of the Rose. Unfortunately the experts do not indicate what shall happen to the ill-fated enthusiast who finds it impossible to secure this essential condition, and whose efforts are spent on a water-logged garden. The object of this paper is to show that he need not be condemned to a Roseless existence, but that with a little extra trouble, and, subject to certain limitations, he can grow Roses which will not compare unfavourably with those of the gardener who enjoys more congenial conditions.

The reader can certainly not be confronted with greater difficulties than the writer, whose garden is situated in the Thames Valley about three feet above the normal water level, and is flooded to a depth varying from an inch to three feet during an average of eight weeks every year between the beginning of December and the end of March. For several weeks after the flood has subsided the ground resembles a bog. The soil below the top eight inches is a steely clay which adheres to the tools like glue when wet and assumes the consistency of a brick when dry. The level of the water in the soil always corresponds with that of the river, so that any drainage is out of question when the river is in flood, or even substantially above the normal level. Having regard to the distribution of rainfall during the seasons, drainage is useful mainly during the winter months when the roots are dormant and do not require much moisture, whereas the rainfall during that period is mostly excessive. In the spring and summer months when the roots are active and require plenty of water, the rainfall is usually insufficient or barely sufficient. So far from drainage being an advantage during those months, our object is rather to conserve moisture in the soil. It will therefore be obvious that in this and similarly afflicted gardens any attempt at artificial drainage would be a wasted effort during the winter, and positively harmful during the summer. Yet the Rose will flourish even under such conditions, and after many years' experience in endeavouring to overcome the natural difficulties of a water-logged garden, the writer has come to the conclusion that success depends mainly on the following four factors, viz.:—

- (1.) Suitable preparation of soil.
- (2.) The planting of well-rooted specimens.
- (3.) Persistent war against fungoid and insect enemies.
- (4.) Selection of suitable varieties.

It is hoped that by giving some hints under these four headings readers who are unable to provide an adequate drainage system for their rose beds may be spared some of the many disappointments and failures which have fallen to my lot.

Preparation of Soil.

The soil in a water-logged garden usually errs on the side of heaviness. The subsidence of excess moisture after the long winter months, and the subsequent drought, which is only too frequent, will cause a heavy soil, especially an obstinate clay, to settle round the surviving fibrous rootlets with the consistency of Portland cement, and whilst firm planting is a desideratum, there are limitations even to the powers of penetration of Rose roots, and a tolerably congenial rooting medium is essential. In order to provide this the ground should be bastard trenched, and in addition to a liberal dose of stable manure (a barrow load to every four square yards) and ½-inch bones (1-lb. to the square yard), and such quantities of rotted turves as are available, a plentiful supply of coarse sand, or road grit, should be worked into both spits, not in layers, but thoroughly incorporated with the soil. Do not stint the quantity, it is wonderful how much lightening material the beds



Blush Queen (H.T.). Certificate of Merit, Autumn Show, September 19th, 1916.
Raised by Messrs. Frank Cant & Co., Braiswick, Colchester.



will swallow up before an appreciable effect is produced. Two barrow loads to every three square yards is by no means excessive. Bear in mind that the road grit must not come from a tarred or chemically treated road, or the remedy may prove worse than the evil.

Where immediate planting is not necessary the following method of preparing an obstinate clay soil has been found by the writer to be superior to any other. When bastard trenching incorporate with both spits in addition to the lightening materials about 4 lbs. freshly slacked lime to every vard. Do not work in the stable manure at the same time or the lime will burn all the good out of it. After an interval of not less than four, preferably not less than six, months, bastard trench again and dig in the stable manure turves and quarter-inch bones. The difference in the soil during the second trenching will be a revelation. Soil that formerly had to be lifted in solid unbreakable clumps will be beautifully friable, and crumble down under a gentle pat with the back of the spade. In fact you will find your clay converted into a very near approach to the ideal loam. This method may seem troublesome, but it is certainly less exhausting and expensive than the removal of a large quantity of soil and the substitution of imported loam, while its permanent results amply repay the labour involved. Needless to say, none of the above operations should be carried out whilst the ground is in a water-logged condition.

One other precaution, which may be regarded in the nature of a luxury under ordinary conditions, should never be omitted when planting Roses in a water-logged garden. Prepare a heap consisting of equal quantities of sand, leaf mould and sifted soil, well mix, and place a few inches of this material beneath and above the roots when planting and before filling in the ordinary soil. This will not only give the roots a good start, but will also ensure that when the floods or heavy rains cease, the excess moisture will leave the immediate vicinity of the delicate fibrous rootlets as soon as possible.

In the comparatively rare cases where the soil of a water-logged garden is of a light character, the preparations recommended above are not applicable, but the treatment should be the usual treatment of light soils which has been so admirably expounded by more experienced rosarians in the 1911 Rose Annual. The only modification suggested is that the moisture retaining agents recommended for light soils should be incorporated well below the level at which the roots are planted.

Planting of well-rooted Specimens.

In a water-logged garden autumn planting is generally advisable, because it is more than probable that during the spring planting period the soil will be so wet as to render it quite unsuitable for any gardening operations. The young Rose, after being more or less tenderly removed from its quarters in the nursery, has therefore to face the always critical period following the transplanting under very uncongenial conditions, and in order to ensure its survival it is absolutely necessary that it should be furnished with an ample supply of sound fibrous roots, otherwise it will never live to see the summer. Probably the stagnant water causes a large number of the delicate rootlets to rot during the winter, and badly rooted specimens have not enough sound roots left by the spring time to supply the plant with the necessary nourishment. Whatever the cause may be, the need for well rooted plants in a water-logged garden is amply proved by experience, and when I unpack the plants on their arrival I can usually forecast the winter casualties accurately by an examination of the roots.

Here we are dependent on our nurserymen, and whilst no parcel will ever consist entirely of perfectly rooted plants, there is no doubt that some firms are greater sinners in this respect than others. During one season I divided my Rose order between two firms of equal repute, each firm supplying half the quantity of each variety required. On arrival the roots of one lot compared very unfavourably with those of the other. The Roses were planted in the same beds under identical conditions, and have received the same treatment throughout, yet even to-day, after five years, it is perfectly easy to distinguish the plants which were originally not well rooted, for they still remain rather weak specimens, and have never made really satisfactory growth, whilst the other lot has produced excellent plants. As regards procuring well rooted specimens, the rosarian has matters very much in his own hands. If in placing his order with a firm of standing he points out his

difficulties, and requests that particular attention shall be given to the supply of well rooted specimens, his requirements will usually be met, possibly at a slightly increased price, which will represent money well expended. If he meets with disappointment, the only remedy is to change the source of supply until satisfaction is obtained. But to continue planting badly-rooted Roses year after year in a water-logged garden will result in certain failure.

Precautions Against Fungoid and Insect Enemies.

An undrained garden provides a perfect breeding ground for all fungoid and insect pests, and the necessity for perpetual and unrelenting war against them is one of the gardener's sorest trials, and least pleasant tasks. I have had the melancholy satisfaction of identifying in my own garden nearly every pest depicted in the Society's Handbook, "The Enemies of the Rose." After many years unremitting work in the unstinted use of all sorts of remedies I am convinced that in a water-logged garden there is no such thing as a mildew proof Rose, and that it is quite impossible to keep such a garden free from fungoid and insect pests. The utmost we can hope for is to reduce attacks to a minimum, and never let the enemy get the upper hand. The main point to remember is that nearly all the enemies of the Rose are ever present in one form or the other, although for the time being they may be invisible. If we wait until the enemy is firmly established, and his ravages are clearly apparent, half the battle is lost and our work will be trebled. There is a world of difference between the significance of that first small patch of mildew when it appears after careful treatment, and a similar patch when it appears in a garden in which no precautions have been taken. In the former case it indicates that the particular plant or part of the plant has not been adequately treated or has become infected by some spores that have escaped destruction and the rest of the plants are probably healthy; in the second case the patch of mildew is the first symptom of wholesale infection, and will within a few days be followed by a general epidemic which all efforts will fail to suppress during that season although by constant attention the fungus may be gradually reduced. Therefore act in time.

The following general precautions will assist in the suppression of pests of all kinds:—

(1.) Burn all Rose prunings and thinnings as soon as possible.

- (2.) Collect and burn the fallen Rose leaves in winter.
- (3.) Arrange the beds so that every plant is easily accessible-without the necessity of treading on the soil.
- (4.) Allow plenty of space between climbing Roses, in particular the very vigorous kinds, otherwise within a few years they will form an impenetrable tangle, and the spray will no longer reach all parts of the plant.
- (5.) Plant none but the most disease resisting Roses against walls or in other confined positions; never use any Wichuraiana or multiflora scandens for a wall.
- (6.) Encourage birds in the garden; they are our best auxiliaries in the fight against insect pests.

As regards particular diseases and insects readers cannot do better than refer to the Society's Handbook, but it may be of interest to add some notes as to the methods which have proved most effective in my water-logged garden against the three most universal and persistent enemies of the Rose—viz., aphides, rose mildew and caterpillars.

As regards caterpillars I have found handpicking the only reliable remedy; for some reason or other arsenate of lead spray has not been very effective with my Roses, although it has kept my fruit bushes perfectly clean from caterpillars.

Mildew is a terrible trial in a water-logged garden, and measures which under more favourable conditions will keep this enemy in check make very little impression. In mid-winter, preferably during a dry spell before the end of January, the plants and the soil of the rosebuds should receive an ample application of sulphate or copper solution (\frac{1}{2}-oz. to 1 gallon of water). From about a fortnight after pruning time down to the middle of October we must adopt a regular routine of thorough spraying with an effective fungicide once a week, or at least once every ten days, as a preventive measure. If in spite of this mildew appears here and there (as it is sure to do) the affected plants and its neighbours should be sprayed every third day until the symptoms vanish. All this seems very troublesome, and is a great deal more than is required in ordinary gardens, but it saves work in the end, for it is marvellous how rapidly the disease spreads under favourable conditions if precautions are neglected. even for a few days.

As regards spraying mixtures the sulphide of potassium solution recommended in the Society's Handbook is effective, but has threeserious disadvantages. Firstly, it discolours white paint; secondly, it has a most horrible smell; and thirdly, it is not effective against aphides. As these latter require constant attention throughout the growing season, we should require a second weekly spraying for this pest also, and we must really draw the line somewhere in these operations, or we shall never find time to look at our Roses and enjoy them. Let us therefore select a spraying solution which will deal effectively with both these enemies. A number of such are available, and the one which I have found most suitable is the Cyllin Soft Soap Solution (with added Cyllin) recommended by Dr. Williams in the Rose Annual for 1910. It is effective, easily prepared and applied, inexpensive, keeps indefinitely, and its smell is not very noticeable or unpleasant; in fact, so far as I am aware, it has no disadvantages of any kind.

Selection of Suitable Varieties.

Even when all possible care is taken there are some Roses that will not prosper in a water-logged garden, and the results are in many cases most unexpected. That the old favourite La France should not succeed is not surprising, but that three such hardy and well tried varieties as Charles Lefêbvre, Général Jacqueminot and Prince Camille de Rohan should prove failures, whilst varieties with reputedly weak constitutions, such as Lyon Rose, Richmond, Mme Abel Chatenay, and many Tea Roses do splendidly without a single loss occurring year after year is certainly amazing. In the case of Charles Lefêbvre and the other two H.P's. above referred to, I should certainly have thought that the premature decease of the whole lot was due not to inability to adapt themselves to water-logged conditions, but to some want of care on my part were it not for the fact that a number of Hugh Dickson in the same bed and a dozen Mrs. John Laing and other H.P. and H.T. in adjoining beds all planted on the same day, under identical conditions, have succeeded perfectly. Why should Liberty fail and its sport Richmond prosper? Why is it that the Lyon Rose flourishes and its more reliable counterpart, Mrs. C. E. Pearson, never survive its first winter? After many experiments I have arrived at the conclusion that no general rule can be laid down as to what particular classes. of Roses adapt themselves to the special conditions of a water-logged garden, and that this adaptability, or its absence, is an inherent quality of each particular variety which can only be ascertained by actual trial. Rambler Roses, both of the Wichuraiana and multiflora scandens classes, are generally successful, and will usually survive prolonged winter and early spring floods, even if they occur during the first season after planting.

For convenience I have divided the suitable and unsuitable Roses into two lists. The first contains varieties of which I have grown a fair number of specimens, for not less than three years, and in most cases for five or six years. The results observed may therefore be considered as fairly reliable, and a rose included as successful under this heading may be planted under the conditions and with the precautions above referred to with full confidence that the results will be satisfactory and the losses insignificant. I have endeavoured to place the Roses in this list in their order of merit as garden Roses grown under the particular disadvantages of an undrained garden, and I must here put in a good word for that excellent Rose Lady Ashtown, which should be exclusively planted by everyone starting Rose growing in such a garden. I have grown 24 specimens for about six years and never lost a single plant, although they were flooded every year, and in 1911 encircled by a sheet of ice for nearly a week. They bloom in the utmost profusion and with the shortest flowerless intervals from Mid June until the commencement of winter, they open well in any kind of weather, produce a large proportion of perfect flowers with little or disbudding, and form a shapely bush.

The second list contains varieties which are of recent introduction, or have for some other reason not been grown in sufficiently large quantities or for a sufficiently long time to settle the question of their adaptability finally. Inasmuch as the varieties included in List II. survived the winter 1915-1916, during which they were under water for nearly three months, there is a fair prospect of their being permanently successful.

The failures in List I. should not be tried under similar conditions, except for the purpose of ascertaining how to overcome difficulties and with the expectation of facing disappointments.

In my garden they have either succumbed during the first winter, or if they survived have never made tolerable growth or produced satisfactory blooms, but have lingered on miserably until finally consigned to the bonfire. It will of course be understood that any of the failures may prove most desirable varieties under more favourable conditions.

The relative liability to mildew of each variety has been indicated in List I. by a letter in brackets: (a) signifies that the variety does not usually originate an epidemic, and if infected will respond to prompt treatment after a short time; (b) indicates varieties which are frequently attacked, and are almost certain to be infected if there is any mildew in the garden unless precautions are taken in good time; by adopting the measures recommended above it is not at all difficult to keep them completely free from the disease. The varieties marked (c) are those which in two seasons out of three will suffer from mildew to some extent in spite of all precautions, and which require constant attention (in addition to preventive measures) in order to check the enemy sufficiently to obviate disfigurement of foliage and bloom.

LIST I.

Successful Dwarf Roses.—Lady Ashtown (c), Hugh Dickson (b), Mme. Jules Grolez (c), Mme. Abel Chatenay (b), Mme. Edouard Herriot (a), General McArthur (b), Lady Pirrie (b), Lady Roberts (a), Richmond (a), Pharisäer (c), Gruss an Teplitz (b, really a semiclimber), Lady Hillingdon (a), Mme. Ravary (a), Jessie (a), Mrs. John Laing (c), G. Nabonnand (a), Betty (b), Ethel Malcolm (b), Fabvier (a), Caroline Testout (b), Heinrich Schultheis (c), Mrs. W. H. Cutbush (a), Lyon Rose (b), Gustav Grünerwald (a), Climbing Mrs. W. J. Grant (b) (grown as a dwarf plant), Mrs. R. D. McClure (b), Mme. Lambard (a), Mrs. E. G. Hill (a), Avoca (b), Mrs. A. E. Coxhead (a), Corallina (a), Alexander Hill Gray (a), Duchess of Wellington (a), Mrs. Paul (b), Mrs. B. R. Cant (a), Maman Cochet (a), Dean Hole (b), Frau Karl Druschki (b, grown as standards only).

Successful Climbers.—Perpetual flowering: Rêve d'or (a), Ards Rover (c), Lady Waterlow (a), Climbing Caroline Testout (a), J. B. Clark (a), Gloire de Dijon (a), Reine Marie Henriette (b), Mme. Alfred Carrière (a), Reine Olga de Wurtemberg (a).

Summer Flowering.—François Juranville (b), Gerbe Rose (a), Léontine Gervais (a), American Pillar (a), Tea Rambler (b), Blush Rambler (a), Tausendschön (c), Lady Gay (b), White Dorothy (b), Dorothy Dennison (b), Minnehaha (b), Dorothy Perkins (b), Paul's Carmine Pillar (a), Auguste Barbier (a), Crimson Rambler (c), Dundee Rambler (a), Bennett's Seedling (b), Félicité et Perpétue (b), most of the Penzance Briars (a).

Unsuccessful Dwarf Roses.—Abel Carriere, Camoëns Rose, 'Charles Lefêbvre, Château de Clos Vougeot,' Edward Mawley, Général Jacqueminot, His Majesty, La France, Lady Mary Ward, Liberty, Mrs. C. E. Pearson, Mrs. Edward Mawley, Mrs. Forde, Prince Camille de Rohan.

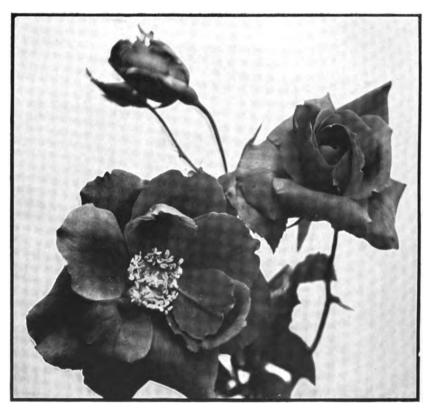
Unsuccessful Climbers.—Catherine Seyton, Conrad F. Meyer, Leuchtstern, Longworth Rambler, William Allen Richardson.

LIST II.

Colleen, Cynthia Forde, Edgar M. Burnett, G. C. Waud, George Dickson, H. E. Richardson, H. V. Machin, Iona Herdman, Joseph Hill, Juliet, Lady Alice Stanley, Lieut. Chauré, Mme. Léon Pain, Mélanie Soupert, Mme. Ségond-Weber, Melody, Mrs. Alfred Tate, Mrs. Foley Hobbs, Mrs. Herbert Stevens, Mrs. Theodore Roosevelt, Old Gold, Orleans Rose, Perle d'or, Queen Mary, Sunburst.

The above lists, which do not by any means pretend to be exhaustive, certainly show that the Rosarian is not unduly restricted in the choice of varieties which will adapt themselves to his waterlogged garden, if only he on his part will take the trouble to provide them with such assistance as I have suggested. It means a good deal of extra work when compared to the task of the average gardener, but there are compensations. The beds, so laboriously prepared, will last for many years without showing the slightest -signs of exhaustion, and (except during the first year after planting) will not require the help of the watering can during the worst drought. After all, are we not amply rewarded for our labours if when we return to our garden from the Annual Summer Show of the Society we find that our Roses are at least just as good as many which carried off the first prizes? Of course, they are really nothing like so fine, but so long as they resemble the prizewinners sufficiently to enable us to believe the contrary, we have not done so very badly.





K. OF K. (H.T.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18th, 1916.
 Raised by Messrs, A. Dickson & Sons, Newtownards, Co. Down.

ARTIFICIAL MANURES FOR ROSES.

By RICHARD W. WOOSNAM, F.I.C., F.C.S., Member of the Council N.R.S.

Probably the average Rose grower is less informed on the subject of manuring than on any other detail of successful culture. Too many are apt to shovel manures of which they know little on to soil of which they know less. The result may be anything. If the Roses are good the manure gets the credit, but if bad the blame is generally laid on the weather. It rarely occurs to the Rose grower that he may have applied the wrong manure at a wrong time to a soil totally unsuited to such treatment.

Everyone knows the novice who is under the impression that show blooms are produced by the application of some mysterious substance to the plants, the name of which is guarded with masonic secrecy. When he fails to discover the wonderful nostrum he frequently settles down to some proprietary mixture which claims to grow anything from a Rose to a radish—of course, at a price proportionate to the magnificence of the advertisement.

It is in the hope therefore of shedding some little light, for the beginner more especially, on the more common of what are known as artificial manures and on their application that the following notes are made.

In the first place, before putting on artificial manures the beds must be thoroughly well made and a good drainage secured. This is absolutely essential. A full $2\frac{1}{2}$ to 3 feet is the depth to which the soil should be dug, taking care to keep the lower spits in their proper place and not mixing them with the top soil. It is taken for granted also that a good stiff dressing of the best dung obtainable

has been added when making the beds, putting it at about a foot below the surface. There are many reasons for making a bed in this way which need not be gone into here, but it is sufficient to say that the addition of artificial manures to soil that has not been properly cultivated is more likely to do harm than good. Further, it is important that there should be a sufficiency of lime present in the soil. This is a necessity, and it is more often in short supply than is suspected. So easily is lime acted on by the decomposing humus in the soil and carried down by the rain to the lower levels that it is not uncommon to have to add lime to land actually situated upon a chalk subsoil.

The manurial value of farmyard dung is low but, largely by reason of its mechanical effect, it is a sheet anchor to all Rose growers, and should always be employed when obtainable. In order to obtain the best results artificial manures should be regarded as supplementary, but when used on well-tilled beds they are most valuable. They are much more powerful than dung in their action, and care must be taken in using them.

The choice of artificial manures is influenced by the quality and variety of soil upon which they are to be used. For example, basic slag is preferred on heavy clays and spring dressings of superphosphates on light loams. The season of growth also has to be considered when giving artificial manures. For instance, if nitrate of soda is put on the beds too early in the year a quick, sappy growth is made which is very susceptible to late frosts, and is also easily attacked by the many diseases to which the Rose is prone.

Many of the substances which go to build up the growing plants are found already in sufficient supply in most soils, and apart from lime the only shortage likely to occur is in phosphates, nitrogen and potash. In order to produce a full crop the amount of each of these must not fall below a certain minimum. There may be an abundance of everything necessary for plant growth except in one essential constituent—it may be phosphoric acid, or nitrogen, or potash—but the shortage in this one respect is sufficient to seriously prejudice the crop, whether it be Roses or anything else.

Where dung has been regularly applied sufficient potash will almost certainly be present. It is well to remember this just now, as practically all the potash salts have been hitherto imported from Germany, and in consequence they can only be bought at an almost prohibitive price. The ashes of the rubbish heap, which contain about 5 to 10 per cent. of potash, may be used instead with much advantage. They should on no account be allowed to remain exposed to wet, as being easily soluble the most valuable portion is soon washed out.

Nitrogenous manures must be used with caution, but at certain times, as, for instance, about the middle of July after the main blooming is over, they are of considerable benefit when given in weak solution.

Phosphatic manures are of the greatest importance for Roses. They give vigour and promote freedom of bloom, and for both exhibition and garden varieties are essential.

The following are some of the most useful artificial manures. After applying them they should always be well hoed in, but care must be taken not to go too deep and thus injure the Rose roots. Choose showery weather, or give a good soaking of water to the beds both before and after application.

Phosphatic Manures.

Superphosphate.—A quick acting manure composed of mineral phosphate treated with sulphuric acid. The process renders a considerable part of the phosphate soluble in water, and its value depends almost entirely upon this. It should contain from 26 per cent. to 36 per cent. of soluble phosphate according to price. Apply in the spring about pruning time at the rate of 3 oz. per square yard.

Basic Slag.—A slower acting fertilizer than the above. It is the finely ground slag from certain steel furnaces, and its value is determined by the fineness to which it is reduced. It should be guaranteed that 80 per cent. will pass through a sieve

of 9,600 meshes to the square inch. Basic slag consists partly of free lime, and no other liming need be employed where it is used. It is generally preferred on soils that are on the heavy side. Apply in the autumn at the rate of 4 oz. per square yard for top dressings. It may advantageously be added to the soil when planting, and as much as 1 lb. per square yard may be used.

Bone Dust.—The powered bones from glue works. Slow acting but excellent if liberally added to the soil when planting.

Nitrogenous Manures.

Sulphate of Ammonia.—A soluble fertilizer prepared from gas liquor and containing 20 per cent. of nitrogen. This may be applied in the spring as a top dressing at the rate of 1 oz. per square yard, preferably about the time that the bloom buds are first visible.

Nitrate of Soda.—A soluble salt dug from the large natural deposits in Chili and adjacent countries. It contains 15.5 per cent of nitrogen. The results from its use are immediate, but it is not retained by the soil quite so long as sulphate of ammonia. It is best given as a top dressing in the spring, using 1 oz. per square yard when the bloom buds have just appeared.

Potash Manures.

Sulphate of Potash and Muriate of Potash.—Both are soluble potash salts, and may be applied in the spring at the rate of $\frac{1}{2}$ oz. per square yard.

Wood Ashes contain about 5 per cent. to 10 per cent. of potash in the form of carbonate. They are very easily soluble in water and may be applied in the spring, using 3 or 4 oz. per square yard.

Peaty and chalky soils are the most often deficient in potash.



Various Other Manures.

Guano.—This varies greatly according to whether it comes from deposits in the dry rainless belt, or from places where it is more or less wet. The best Peruvian Guano is a rich complete manure, whereas the common kinds are of value only for the insoluble phosphates they contain. When buying, a guaranteed analysis should be insisted upon.

Bone Meal is unsteamed bones ground to a meal. It is slow acting, but contains nitrogen as well as insoluble phosphates. Bones may also be bought crushed in various grades, such as $\frac{1}{2}$ inch and $\frac{1}{4}$ inch. In any size they are useful for mixing with the soil when planting, but in the larger sizes the return is very gradual and spread over some years.

Dissolved Bones.—This is somewhat similar to superphosphate, except that instead of mineral phosphate bones have been used for treatment with sulphuric acid. It should be made with unsteamed bones, and then contains nitrogen as well as soluble phosphate.

Fish Guano is dried treated fish refuse ground to a meal. A good sample will contain about 8 per cent. of nitrogen and 10 per cent. of insoluble phosphates. It is a slow-acting manure, and is therefore best applied in the autumn.

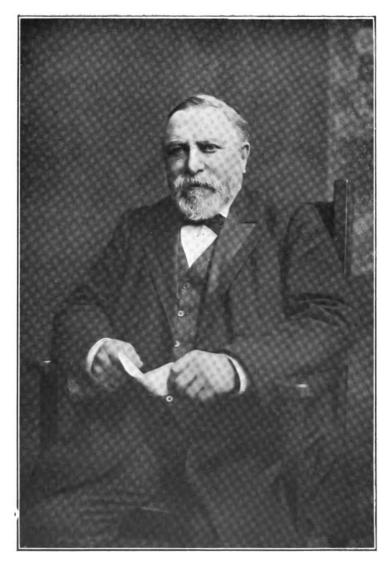
Dried Blood contains about 10 per cent. of nitrogen, and decomposes in the soil fairly quickly. It contains very little phosphate or potash, and must be used cautiously, as it tends to promote sappy growth.

Hoofs and Horns, Shoddy, &c.—These are very slow acting indeed. They are rich in nitrogen, but their decomposition is altogether too gradual for most Rose growers. They may be used with advantage, however, when planting climbing Roses in more or less permanent positions. In these circumstances a phosphatic fertilizer should also be added, as, apart from their nitrogen, there is little manurial value in any of them.

The foregoing are the more ordinary artificial manures in use. There are in addition what are known as compound manures, some of which are described as "Special Rose" manure, and often bear a fancy name. Many of them are well balanced and of value, but there are others which are made up of material which is unsuitable and of little immediate use. When contemplating the purchase of a compound manure it is well to remember that the fertilizers one would use as a spring top dressing are not the same as those to be selected for incorporating with the soil at planting time in the autumn. Also that the most suitable manure on one class of soil would very likely have to give place to others on a different staple. The price, too, of these "special" manures is nearly always far in excess of their unit value.

But little serious experimental work has been carried out in the matter of Rose manuring, though the general principles as applied to farm crops are adapted here also. It may be hoped that in more normal times some attempt will be made by our Society to establish an experimental station in which trials of various kinds may be conducted and the results periodically published in our Annual. Many important and highly interesting questions suggest themselves. As an example, "What is the effect of increasing quantities of magnesia on Roses?" It has recently been pretty well established that upon wheat lands the addition of magnesia is beneficial to the crop so long as it does not exceed the amount of lime present. Beyond that limit it has the reverse effect. There are soils in this country in which an excess of magnesia over lime occurs, and where the addition of the latter in sufficient quantity to redress this has had a very great effect. Does not this in all likelihood apply to Roses also? There are, of course, many other problems which occur to all of us as important and suitable for systematic investigation, and it is to be hoped that some day in the future the National Rose Society may find itself in a position to undertake their attempted solution.





GEORGE PAUL, V.M.H., VICE-PRESIDENT N.R.S.

SOME MEMORIES.

By GEORGE PAUL, V.M.H., Vice-President N.R.S.

My first recollection of Roses is of the occasion when I went as a lad to Paris with my father to see the first great French Exhibition in 1855, and visited Mr. Laffay, who had retired to a house and garden amongst the woods of the Paris suburb of Belleville, taking with him his seedling Roses. I remember seeing for the first time, as a novelty, the green Rose, Rosa Viridiflora, and at St. Denis a new Rose, Souv. de l'Exposition. Of Roses I do not recollect anything else connected with this visit, but several of the Rose nurseries were then within the Paris Fortifications, and M. Jules Margottin, whose father's nursery was just opposite the gateway of the horse market, depicted in Rosa Bonheur's famous picture, was my boy chum, and we have been friends for sixty years.

Among the Rose growers of Paris at that time were M. Victor Verdier and his sons, Monsieur Lévêque and Monsieur Ferdinand Jamain.

I entered the nursery business as a pupil of my subsequent long and much-esteemed friend, Mr. Charles Fisher, of Handsworth, where I learned to know and love hardy trees and shrubs other than Roses. In 1860 I returned to help my father at Cheshunt, and in 1861 had my first experience of Rose showing, staging pot and cut Roses, as I have continued to do until this year, a period of fifty-six years.

The Roses of that period were mostly summer Roses—gallicas, albas, Hyb. Chinas and a long List of Teas, nearly all of which have disappeared from cultivation; but the Hybrid Perpetuals were just beginning to appear. It was my good fortune to see the development of this family of Roses, which had already become a fairly numerous class, though of the names in the catalogue of 1861 only some four remain in cultivation. These are Général Jacqueminot, Jules Margottin, Sénateur Vaisse, and Victor Verdier. But in 1861

my old friend Monsieur Lacharme, of Lyons, began to give us his famous series, beginning with Charles Lefêbvre, followed by Alfred Colomb and many others. Amongst other raisers at Lyons were M. Guillot, of Lyons, and his son, M. Pernet and M. Liabaud, with all of whom, by occasional visits to see new Roses, I became intimate, and I came to esteem them highly for the care they took in sending out novelties, for these men never sent out any Roses but those with which they themselves were contented.

The English raisers were not numerous. I began in 1861 with Lord Clyde, and subsequently followed in 1867 with Duke of Edinburgh, continuing in the early seventies with S. Reynolds Hole, *Cheshunt Hybrid, Sultan of Zanzibar, Duke of Connaught, and John Bright; ending the series of these bright crimson Roses with Duke of Teck in 1880. There was rather a gap in English Roses for the next five or six years, but about 1889 I continued a new series of Roses with Cheshunt Scarlet, J. D. Pawle, Charles Gater, and the Bourbon Mrs. Paul. Encouraged, perhaps, by our success in sending out the Sweet Briar Janet's Pride, a find of Mr. D'ombrain or Mr. Whitwell, I continued the single Roses with Paul's Carmine Pillar, Dawn, and Una, which are still found in gardens. Thinking there was some future in the rugosas, about 1899 we selected from a mass of seedlings rugosa Atropurpurea and the wonderful single white rugosa repens alba. When Turner's Crimson Rambler appeared my son used it for hybridisation, which resulted in a succession of climbing Roses beginning with Psyche, Tea Rambler, Lady Godiva, Goldfinch, Sweet Lavender, etc., many of which seem to hold their own in the gardens of the present day.

I have now been an exhibitor for fifty-six years. At the time when there were two or three weeks of Rose-showing consecutively our annual average for first prizes reached from forty to seventy, and as my dear old friend, the Dean of Rochester, and long time President of the National Rose Society, used to say, a Rose grower's bed was not a bed of Roses, for it often meant travelling three or four nights a week in order to be at the shows in time to stage in the

^{*}Introduced by Mr. G. Paul in 1873. The first Rose ever sent out as a Hybrid Tea



early morning. Many such a journey have I taken with my old friend and foreman, the late Mr. Charles Gater, and at the close of the Rose-showing period we were both fairly fagged out.

It was my good fortune to meet in the Exhibition Tent most of the leading Rose growers, and I look back with immense pleasure to the friendly relationships which always existed, not only between the amateurs and the nurserymen, but also amongst the nurserymen themselves. Among my close friends were Mr. B. Cant, Mr. John Keynes, of Salisbury, Mr. John Cranston, of Hereford, Mr. Charles Turner, of Slough, Mr. George Prince, of Oxford, and many others; and of the amateur champions I may class as close friends the President, Dean Hole, Mr. Baker, of Exeter, Mr. Baker, of Reigate, Mr. Lindsell, Mr. Camm, Mr. Whitwell, and the old amateur, Mr. Charles Perry, who was one of the founders and leading men of the Birmingham Rose Shows; but the friends I made are almost too numerous to record, and although we fought against one another, nothing disturbed our intimacy or pleasant associations.

With the National Rose Society it has been my privilege to be connected since its inception. At one of the pleasant afternoon lunchcons at a Reigate Show the suggestion was made that the scope of the Brockham Rose Show might be extended to make it a national one. This idea was talked over at Hereford when Mr. Baker, Mr. Camm, Mr. D'ombrain, Mr. Bulmer and I met at dinner at Mr. Cranston's house. Afterwards a subsequent meeting was held at the Adelphi Terrace, where the Horticultural Club of the day had its first home. The enterprise was liberally supported, and the first show, which was held at St. James's Hall in 1877, was a great success from the point of view of a Rose show; but we used up nearly all our funds in expenses, and the prize winners had to wait for better times for their money. The Society's subsequent successful career, which we owe so much to Mr. D'ombrain and to our dear friend Mr. Mawley, is well known to everyone.

It is rather difficult to write of oneself, but I have endeavoured to note down a few of the things that have struck me during my fairly long connection with Rose culture.

THE DECLINE OF THE HYBRID PERPETUAL ROSE.

By GEORGE BURCH, Member of the Council N.R.S.

It has often been remarked that the Hybrid Perpetual Rose is waning in popularity, and the reason given is the rapid advance and improvement of the Hybrid Tea, which gives a wider range of colour, more refinement in form, more abundant flowering and earlier bloom. While these characteristics may be true with regard to the Hybrid Tea, yet it is scarcely, or at least is not entirely, the reason why the Hybrid Perpetual is not grown so extensively as formerly.

The chief reason for this is doubtless to be found in the decline of the Hybrid Perpetual Rose. However much it may be regretted, the fact remains that the quality of blooms now obtainable from this section of the Rose is far and away below the standard of excellence that for a number of years made it the glory of our Rose Exhibitions and the delight of our gardens, but which now only lives in the memory.

Preceding the advent of the Hybrid Tea, the classes for competition at the Rose shows for 72 and 48 distinct varieties were composed chiefly of the Hybrid Perpetuals, which in size, form and colour were more than equal to anything staged in these classes to-day; indeed, we miss the rich deep reds and dark velvety crimsons, as well as the delightful fragrance then prevailing.

An effort was made this year at the National Rose Society's Exhibition in Regent's Park to revive the Hybrid Perpetual by offering substantial prizes for Roses that were introduced before the coming of the Hybrid Teas; but the one box of blooms then exhibited in this class contained but few of the Hybrid Perpetuals, and these were most unattractive. It quite proved the difficulty that



MRS. BRYCE ALLAN (H.T.). GOLD MEDAL, SPRING SHOW, 1916. Raised by Messrs. A. Dickson & Sons, Newtownards, Co. Down.



now exists in obtaining good blooms of this particular class of Rose. It is true that in the North of England and across the border it is possible to grow blooms of many of these varieties as finely as ever, and at the Autumn Rose Show they seem to come from the past as old friends whom we now rarely meet with, and it is also true that in one's own garden superb blooms may still be found of Charles Lefêbvre, Alfred Colomb, Louis van Houtte, Horace Vernet, Ulrich Brunner, Mrs. John Laing and a few others; but the rank and file—where are they? I look in vain for fine flowers of such Roses as A. K. Williams, Duchess of Bedford, Earl of Dufferin, Reynolds Hole, Victor Hugo, Xavier Olibo. They appear to have long reached their zenith, and only linger here and there, as shadows of their former beauty.

The reason for this decline may be traceable to the fact that many varieties of flowers, Roses included, that have been obtained by cross fertilisation, have only a limited period, during which they are capable of producing blooms of the highest excellence, although some varieties with more vitality than others retain this power for a longer period; for instance, Alfred Colomb will outlive Earl of Dufferin, and Charles Lefêbvre will long survive when Duchess of Bedford is forgotten.

Another reason may be that while new Hybrid Teas have been produced by the hundred, the supply of new Hybrid Perpetuals, equal in merit to Hugh Dickson, Coronation, and Candeur Lyonnaise, has been exceedingly limited. It is evident that more attention should be given to this beautiful and useful class of Rose, and something should be done to induce our Allies across the seas to help us in this respect, as they have in past years, for we cannot forget we are indebted to them for the bulk of the varieties we already possess.

One might go on to show that not only in Hybrid Perpetual Roses is this decline observable, for already some of the earlier Hybrid Teas show that a marked deterioration is steadily going on. It is easy to enumerate varieties that once held high positions. some gaining the gold medal of the National Rose Society, but are now rarely seen, such as Lady Mary Fitzwilliam, Viscountess Folkestone, Souvenir du President Carnot, Countess of Caledon, Marquise Litta, John Ruskin, Edith D'Ombrain, etc.

In the case of Tea-Scented Roses, moreover, there was a time when Souvenir d'Elise Vardon was perfect in size and form, and when Comtesse de Nadaillac was commonly expected to win the medal for the Best Tea in the Show; and there were also seasons when Madame Cusin, Madame de Watteville, and Souvenir de S. A. Prince were winning prizes in classes for 12 Teas of one variety, well filling the boxes with blooms of the highest quality; nor can we forget the magnificent blooms of Cleopatra exhibited at the National Rose Society's Show which was held at Windsor in 1894; the blooms were truly wonderful in size and finish. But if this variety leaped thus to its zenith with great rapidity, surpassing all other Teas, it has quickly degenerated, and is now almost lost; but while these are fast declining other and newer Teas are taking their place; and although we regret the passing of many that charmed us in their day, we look with delight on the marvellous productions of recent years in other sections of the Rose; for the dream of the wizard has been realised in beauty of form, and in colour almost indescribable, providing visions of enchanting loveliness in coral, flame, and gold.

BLACK SPOT ON ROSES.

Those badly troubled with this disease might do worse than give a sulphate of iron dressing to the beds during the winter, and follow this up during the next growing season by spraying with a copper sulphate solution, either the ordinary Bordeaux or the ammoniacal forms, but of weaker strength than is usual for potatoes.

Acting on a suggestion last season, I tried these remedies, and with much better results than any other I have tested. Sulphide of potassium, as well as two different fluids obviously largely made up with this chemical, proved useless in my garden, and last year I despaired of finding a remedy, because the disease was most virulent. Starting on Juliet, it spread all round, and by early August two of my beds were almost cleared of foliage. The idea of picking up the fallen leaves appeared to me a difficult one, therefore I paid little heed to it, and as soon as the bushes were clear I dusted the ground with powdered iron sulphate, using about 4-oz. to 6-oz. to each 5-ft. by 10-ft. bed. A second dressing was given in February. Incidentally, I looked forward to seeing my Darwin tulips benefited also, for I make a point of having a double display from my Rose beds. Spraying with Bordeaux mixture commenced in March, largely with a view to staying off "fire" in the tulips, and once each week I similarly sprayed until the tulips were in flower.

As a result I had less "fire" in the tulips last spring, and when I visited home recently, after two months absence, I was amazed and delighted to find scarcely a Rose bush affected with Black Spot. Even Juliet, which I had decided to burn, was as clean as possible, and it is my intention to have similar dressings applied in future.

T. A. W.,
In the "Gardeners' Magazine."

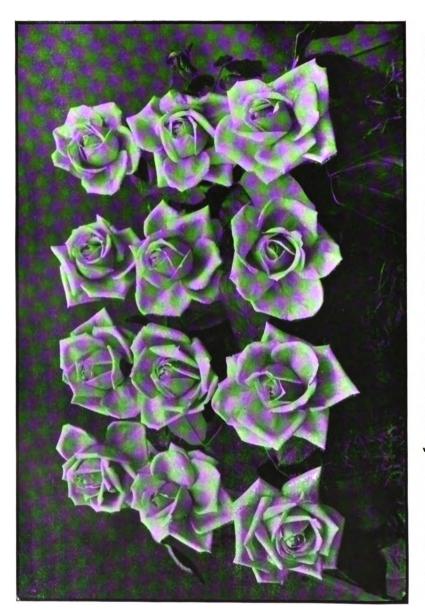


HOW TO GROW MARÉCHAL NIEL.

By A. T. GOODWIN, Roseholme, Maidstone.

The position of our plant house is a very favourable one. facing due south on a bank sloping down to the Medway; the greenhouses are all three-quarter spans about 3-ft. or 4-ft. high to the eaves in front, the front rafter about 16-ft. long and the back one 6-ft. long. In some of the houses peach trees are planted on trellises at right angles to the back wall (which is about 12-ft. high) with Maréchal Niels planted in front between each peach tree, and allowed to climb up the roof. By this means the peaches get the morning sun on the east of the trellis and the afternoon sun on the west of it, while the sun shines full on the back wall and on the Roses in front. In other houses the Maréchal Niels are planted up the front of the greenhouse and cover the roof, and peach trees are planted on the back walls. All our Roses are on briar, which we find by far the most suitable stock. After the first year's growth has flowered we cut fairly hard back and take two shoots and lay them along the bottom wire of the trellis right and left. As these make growth we disbud all the shoots that are not wanted, and let the others go right up. We do not "head" these back at all, but in the spring, or preparatory to starting the house, we cut the shoots back to where the wood is hard, and give a gentle heat.

It will be seen from this that Maréchal Niels are by no means our first consideration, but I think our success—if I may say so—lies in the position and soil, with the Kentish rag below for a good drainage.



FIRST PRIZE BOX OF MARECHAL NIEL (N.) EXHIBITED BY MR. A. T. GOODWIN AT THE SPRING SHOW, 1916.







C. E. SHEA (H.T.) ROYAL BOTANIC SHOW, JUNE 30TH, 1916.
Raised by Elisha J. Hicks, Hurst, Twyford.

AN EXHIBITOR'S GARDEN.

By GULLIVER SPEIGHT, Market Harboro'.

Much has been written on how a Rose garden should be prepared and planted, and perhaps the following may be of interest in showing what to avoid.

My garden was originally four plots of building land, and lay in grass ridge and furrow.

The soil consisted of 15 inches of heavy loam on clay, the ground sloping nicely to the south, but open to the north-west and north-east. Half of the ground I intended planting with exhibition Roses; the remainder I proposed to use for a house and a fruit garden. I may say the house is not yet built, and the fruit trees have gone, the whole being now planted with 2,500 Rose trees.

The most serious mistake I made was in the preparation of the Rose beds—round, square and oblong, the soil being simply turned over to a depth of 18-in., some of the clay being brought to the top. No manure was added, and the soil between the beds was not moved. This, combined with the heavy soil on the top, prevented any drainage, kept the beds very cold, and was the cause of much mildew. Another serious blunder made was in planting the Rose plants too deeply.

The first season the plants made very poor growth, and were badly mildewed. This was most disappointing.

In the winter I had the whole of the ground between the beds moved to a depth of about 2-ft.; this improved the drainage. The following summer the Roses prospered much better, but mildew was rather prevalent, and later in the season even the hedges on the

north and east became badly mildewed. During the next winter I had the hedge cut down to 2-ft. in height. This proved to be another mistake, because it let in the cold winds—a very great drawback in growing large petal blooms. I also found it necessary to stake nearly all shoots.

The present hedge is being used by the adjoining allotment holders as a support for beansticks, wheelbarrows, etc., and a dump for all kinds of garden refuse, consequently it refuses to grow higher again. I experienced the greatest disappointment when I found that my garden was a late one; this and "the wisdom" of the Council in holding the Great Show at an early date, consequently I have only once in twelve years been able to exhibit well.

The following year I "enlarged my borders," removing some of the fruit trees. The new ground I had well trenched, a good quantity of mortar rubbish added, and a liberal quantity of light manure added to the top spit. This I find is necessary on the heavy ground to prevent cracking. The Roses on this plot have done splendidly.

The following winter the remaining fruit trees had notice to quit, and the ground was trenched, and planted with seedling briars in double rows. This method and arrangement I strongly recommend to anyone who intends planting Roses for exhibition.

My garden will grow red Roses well. Teas I am not able to grow, so as to be able to show to best advantage.





NELLIE PARKER (H.T.). GOLD MEDAL, ROYAL BOTANIC SHOW, JUNE 30TH, 1916.
Raised by Messrs. Hugh Dickson, Ltd., Belfast,

A FEW NOTES FOR BEGINNERS BY A BEGINNER.

By Major A. D. G. SHELLEY, Stonegate, Sussex.

My excuse for these notes is that a beginner is generally a better helper to another beginner than is the expert, who in his fuller knowledge seems to have forgotten the early difficulties he overcame in the distant past. In recording the conclusions based on a few years' experience, I am aware they can only assist those who have just commenced to grow Roses, but despite their crudeness and unorthodoxy, I hope they may help some beginner in search of information. I have tried to arrange the following notes in a more or less chronological order, and hope that this will be found convenient.

Selection of Varieties and Plants.

Beginners are often advised to regard Rose catalogues as poetical compilations in which imagination and fiction prevail over reality and truth, and to resist the lure of exhibition blooms as staged at the various shows. Personally I have not found the professional grower to trifle so unblushingly with the truth as some would have us believe, but he is rather well stocked in adjectives, and, naturally, is a little blind to the imperfections of his own creations. Taken as a whole, however, the catalogues of good Rose specialists contain much valuable and reliable information, and, when shorn of redundant adjectives and compared with each other, are most useful in drawing up a list of Roses for one's own growing. With regard to exhibition flowers, it may of course be the fact that a fascinating bloom is the rare product of a large number of plants of a variety difficult to grow, stingy in florescence, and miserly in opened blooms, but the contrary may be and very often is the case.

Every Rose admired at an exhibition is worthy of investigation. and if any one variety is not only largely represented, but is observed to be good at spring, summer and autumn shows, there is a probability, verging on certainty, that it will be found satisfactory in all respects. A great deal of valuable information may be derived from notes in the gardening papers, and books on Roses, visits to the gardens of friends, and, above all, inspection of plants in the nurseries of professional growers. My own method of working is to draw up a list of varieties from all the sources of information available, and then to "comb out" those kinds which are adversely reported on, or which obviously do not flourish under the rather rough treatment they receive when grown in quantity in the open field. It is never advisable to judge the value of a variety from limited experience with one or two specimens, and, above all, it is necessary to be very cautions about buying Roses grown under starvation conditions, and with little or no attention to clean cultivation. Beware of those growers who point with pride to a diseased lot of plants, terribly neglected, and often growing in miserable soil, and tell you that if plants live under these conditions they willgrow anywhere, it being immaterial to them how plants look in the nursery, provided they do well in their customers' gardens. These observations may sound plausible, but I have found that plants from such nurseries are often conveyers of infectious diseases, and in nearly every case are so exhausted by their struggle for existence, that any robustness of constitution originally possessed has been completely shattered. It is generally more profitable to develop vigorous growth in a plant of average health and strength than to nurse a battered warrior through a tedious convalescence to confirmed? invalidism.

Disinfection and Planting.

Before the planting season arrives the ground in which Roses are to be planted should be prepared in the manner described in text books, and a supply of bone-dry earth should be stored under cover to enable planting to be done when the soil is sticky. The sooner after receipt that a new consignment is planted the better, but if

delay cannot be avoided the new plants should be bedded in immediately, and as far away from other Roses as possible. Every new plant should be regarded, not as a probable, but as a certain source of infectious disease, and should not be allowed permanently into the garden until it has been minutely examined, diseased parts removed, wounds treated, and the whole plant thoroughly disinfected. This is often a tedious business, but must not be shirked, as the health of the whole collection of Roses depends on the completeness with which the work is done. Proper planting and diseasefree plants being all-important, I entrust the work of planting and disinfection to no one, but invariably do it myself. So soon as weather and other circumstances permit of planting, I open the new consignment, and plunge each Rose, top downwards, into a tin about 2-ft. 6-in. deep, filled with a luke-warm and very weak solution of any reliable fungicide. This operation is done under cover to avoid exposing the roots to wind and sun, and after about ten minutes' immersion, the plants are removed and placed in water of sufficient depth to cover the roots. They are then taken out one by one, closely examined, the roots trimmed, and all diseased portions very carefully cut out. When this surgical treatment is finished the whole of the plant above stock is painted with a strong solution of Bordeaux mixture, applied with a small stiff hog's-hair brush, and returned to its water bath in readiness for planting. At the present time it is exceptional to receive new Roses which are quite free from an infectious form of canker, which threatens to be a deadly scourge, so that the utmost care should be taken to cut out every trace of the disease. In this work carving tools will be found of great use, but whatever instruments are employed they must be very sharp, as unless clean cuts are made, much healthy growth will be needlessly ruined. When about a dozen plants have been operated on they are taken in their water bathwhich with me is a wooden bucket-to the place where they are to be grown. If not previously done, each "station" is then opened out, a central conical mound being left, the top of which is so far below bed level as will bring the budding of the plant placed on it level with the surface. If the ground is wet, the mound and sur-



rounding hollow is covered with two or three inches of the stored dry earth, the depths of the mound and excavation being, of course, proportionately increased. As each rose is removed from the water it is seated on a heap of dry soil, handfuls of which are thrown over the roots. It is then held roots upwards, and dry soil thrown on them, so as to penetrate interstices which otherwise might escape contact with the earth when planted. This treatment results in the wet root fibres being very completely covered with adherent dry soil, and is, I believe, one of the most important factors in successful planting: but of some three hundred Roses planted on this system. I have only lost two dwarfs, "Candeur Lyonaise," and these plants. which were mislaid by a certain railway company, appeared quite dead when they reached me. When the roots seem to be sufficiently coated, the plant is placed on the mound, and the rootlets spread out so as not to cross each other, being kept in position by dry soil sprinkled over them until they are buried to a depth of two or three inches. Over this dry soil I throw the surrounding earth of the bed to form a layer of about 1-in., and then grasping the plant by the collar, shake it up and down a few times to induce the dry soil to fill up all root interstices. This done I start treading the ground over the roots, making good any sinkage with fresh soil until the spot is flush with bed level. In addition to treading I also force soil down alongside the stem with my fingers. Consolidation should be commenced as soon as it can be done without injuring the roots, and continued by adding fresh soil trodden down in thin layers. Firmer planting is secured by this method than by postponing the treading until the whole of the soil is in position. Despite every effort to achieve this, success is rarely secured at the first attempt, and it is always advisable to repeat the treading business a fortnight later.

Grouping.

All authorities advise the planting of Roses in groups of one variety, so as to obtain broad effects of massed colour, and uniformity in height. With the exception of beds of some much-loved Roses, such as Lieut. Chauré and Ophelia, large groups of the same Rose

are not so attractive to me as collections of different kinds. There is an interest in studying the idiosyncracies of different varieties which is lacking in the orthodox arrangement, and I maintain that this interest can be enjoyed without sacrifice of general effect. There are many different Roses so nearly alike that they can be grouped without prejudice to any artistic scheme of colour, and I would even go so far as to say that at 15 yards distance no one could be sure whether a bed of apparently the same Rose is really planted with one or with several varieties. Some Roses also are far from constant in colour, and of course many blooms change their hues with their age, so that massing by varieties does not secure absolute uniformity. Habit of growth is quite a different matter, and an indiscriminate mixing of semi-climbers and dwarf bushes can never be satisfactory.

Cultivation.

In "Rose Growing for Amateurs" Mr. H. H. Thomas makes some very instructive remarks on the gentle art of pottering, and the equipment which should be kept conveniently near the Rose garden to enable the potterer to effectively perform his all-important functions. I would add to his list of appliances the "Cuma," a small fork with three claw-shaped prongs, and a few flower pots buried in the ground to serve as "tidies" for the reception of leaves, &c., when the "trug," or wooden garden basket, is not at hand. In pottering many apparently trivial matters are noticed and instinctively attended to, with the result that oftener than one supposes the small beginning of an infectious disease is destroyed. Insect pests lead an unhappy life in the potterer's garden, and rarely put up a good fight for existence and reproduction. When sauntering among my Roses I always remove every leaf which is spotted, badly crinkled, curled, or which has an unusual appearance. Such variations from the normal are not signs of health, and if a leaf is sick its useful life is short, and it may be a nursery of fungoid or bacterial disease, so it is better in the bonfire than in the Rose garden. Fallen leaves, particularly those which drop early in the year, I regard with suspicion, and so far as possible I collect and burn

them. Not only leaves, but other young growths should be examined for disease, and treated with a fungicide if affected. Prevention is a much easier matter than cure. Bush Roses have an extraordinary predilection for working loose, and in that condition never do well, so the potterer should be on the alert to detect and remedy this fault. It occasionally happens that newly-planted Roses annex the stimulants and rich food given to their seniors, and suffer in proportion to their greed. In bad cases there is nothing for it but to take the plants up, wash the roots thoroughly in water, and replant in fresh soil. Of course accidents of this sort should not occur, but it is not so very difficult to err where new and old Roses are grown in the same beds, and when the help of a youthful assistant cannot be despised.

Freedom from disease is largely dependent on clean cultivation. or, in other words, on systematic hoeing, the removal and destruction of weeds and dead vegetation, and regular spraying. So much has been written on the need for keeping the surface soil pulverised that I can pass over the subject without comment, but the importance of weed-free beds seems to have escaped the attention it deserves. As weeds often act as hosts for injurious fungi during such times as they cannot develop on cultivated plants, the absence of weeds is a decided deterrent to the perpetuation of fungoid diseases. A very cursory examination of such common weeds as groundsel and docks will show that the former is often smothered in rust, and the latter heavily attacked with some spot complaint. Dead and decaying leaves afford a happy home to hibernating winter spores, and any trouble taken in collecting and burning fallen foliage, stalks, &c., will be amply repaid. Spraying ought to be regarded as a preventative and not as a curative measure, so should be carried out at regular weekly intervals during the growing season. Equally important is the winter spraying of the plants and of the ground under and between them. By this means the stems and such fallen leaves as have not been removed are to a great extent cleared of resting spores. Two sprayings should suffice, the second being completed before the buds show any signs of swelling. Where mildew of the thorns is noticed, winter wash forcibly applied with a small hog's-hair brush will effectually destroy it. The stems of Roses being very tender in comparison with the boughs of fruit trees, the spraying mixtures used on the former should be much weaker than those recommended for the latter, but with care a really potent dressing can be administered to the soil. Personally, I avoid the caustic preparations, and rely entirely on McDougal's Winter Wash which, if slower in action, "gets there" all the same, and seems to have a healing effect on bark wounds.

When a plant, showing no marked signs of disease, is unhappy, and its condition is not due to looseness in the soil, nor growths of suckers from the stock, it can often be restored to health by replanting in a new position, and in fresh soil obtained from another part of the garden. It is extraordinary how a Rose will sometimes respond to a change of position, although the old and new sites are apparently identical in respect to soil conditions, aspect, protection and drainage. There are, of course, a few discontented and cantankerous plants, which one cannot please "no how," and in this category I place those which continue to sulk after transplanting. Clearly their mission is to furnish potash for their betters, and no mistaken kindness should thwart them in their duty.

EARLY ROSES IN POTS.

By HARRY G. MOUNT, Member of the Council N.R.S.

My object is to explain as briefly and as clearly as possible the system practised by my firm at our Canterbury Nurseries in growing early Roses in pots, with a view to get them into bloom about the end of January or beginning of February.

To ensure getting good blooms at this time of the year, the first consideration is to have well-ripened plants to start with, and plants that are also quite established in their flowering-size pots by the preceding late summer or early autumn. We usually use 8-inch pots, though a number are also grown in 7-inch pots, but the 8-inch are best if they are to be kept on for a number of years.

Some of the plants may be ten years old or more, though of course the weakly ones are being continually thrown away and young plants grown on to take their places; but as long as a plant is healthy and vigorous no particular notice is taken of its age.

We commence the season's work by getting the plants into the greenhouses from the outside beds, where they have been standing all the summer, about the first week in October. If they should be at all wet or sodden by rain, they are not watered until the soil gets moderately dry again. This, under most circumstances, should not take more than a week or so, and then they are turned out of the pots so that the crocks for drainage may be put in good order and worms removed.

We then return them again into the pots and take off all the sour top soil to the depth of about half an inch or so, and replace with good loam mixed with a little horse manure and bone flour. This top dressing is put on and well rammed down to a level of about



MRS. A. W. ATKINSON (H.T.). CERTIFICATE OF MERIT, ROYAL BOTANIC SHOW, JUNE 30TH, 1916. Raised by Messrs. Chaplin Bros., Joyning's Nursery, Waltham Cross.



½-in. below the rim of the pot. This is done before the plants are pruned, and during all the month of October full air is kept on night and day. They may require watering several times if the weather is fine during this month; the necessary amount of course depends on the weather.

By the end of October the plants should be beginning to have all the eyes well plumped up ready for pruning, just as outdoor plants would be by the end of a warm February or early March. We usually commence pruning early in November, and prune, roughly speaking, down to within 6-in. of the top of the pots, though of course this is only an approximate length. Some plants may have to be pruned harder and some less, but if possible it is well to get a good outward looking eye to prune to. After pruning it is most important that care should be practised in watering, very little water will be wanted for a few weeks. If the weather is at all sunny, full air should still be kept on during the day, and a little allowed also at night, but the precise amount to be admitted must be determined by the state of the weather.

On sunny days a good syringing in the morning with clear water, or with a little soap or insecticide in the water, will help the plants to break, and also keep them free from pests, but it should not be done too late in the day, certainly not after mid-day all through November. During this month fire heat will probably not be required, as a temperature of 50° to 55° will be enough, and if it should go below this no harm at all will be done. When December comes the plants should have shoots from half an inch to an inch long, and they will now require fire heat to help them along.

Under this treatment they have been growing naturally, and if no heat is given they will soon stop growing and begin to rest for the winter. December, therefore, is the time to commence giving them fire heat, and the temperature should not fall below 50° to 55° at night during ordinary weather. If the outside temperature should, however, become very low, a temperature of 45° to 48° will

not hurt, though the plants would grow somewhat slower. If the temperature should fall much below 45°, say to 85° to 40°, the plants would probably stop growing for some little time and they would not flower by early February, though even then, if they have not been kept at too high a temperature earlier in the season, no harm would really come to them beyond retarding the time of flowering.

Air should be given every day if possible, but as the foliage begins to grow it is most important that no cold draughts should strike directly on to it. If cold draughts are allowed to reach the foliage, mildew will probably make its appearance in a day or so, and will be very difficult to get rid of, should it once become established.

In the matter of ventilation, trade growers will probably always have an advantage over amateurs. It is very necessary to be always on the watch for changes of wind and temperature, and unless someone is constantly on duty there is the chance that sudden change in the weather may upset the best-laid plans. During this time of the year and right up to the end of March the ventilation may require altering twenty times a day. Where it is possible to give due attention the best thing to do is to keep the plants on the hardy side—that is, have plenty of ventilation and not too high a temperature right from the start. We endeavour to keep the temperature at about 55° to 60° during the day, and at 50° to 55° at night.

If the plants are doing well they will not be troubled a great deal by green fly or any other insects, but careful observation must be kept, and they will probably require fumigating with some nicotine preparation about once a month. Should insects make their appearance do not wait until the attack is bad before fumigating, but have the job done at once. We usually find we have to fumigate twice before Christmas.

When the shoots begin to show signs of forming buds we give them a slight feeding with some chemical manure dissolved in the



ARCHIE GRAY (H.T.). CERTIFICATE OF MERIT, ROYAL BOTANIC SHOW,
JUNE 30TH, 1916.
Raised by Messrs. Hugh Dickson, Ltd., Belfast.



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water about once a week, but if the weather is very dull it may not be possible to do so quite as often. We always like to give one watering with clear water between each watering with manure.

We do not use any one particular manure only, but change about, using Clay's, Bull's, and Renny Forbes' complete manures, and also give the plants a little soot, sulphate of ammonia, sheep manure, Peruvian guano, and a certain amount of lime. This seems a very formidable list, but it is really not so, and probably if we were to restrict ourselves to one or two only of these ingredients, we should get the same results.

We really do not give the plants a great deal of manure, and it is only waste of money to give them more than is necessary. We often find it a good plan to withhold manure altogether during the time of flowering if the colour of the bloom should be at all poor. Another way to improve the colour, if it is not all that it should be, is to reduce the temperature for a few days by about 5°, but this must not be overdone or the plants will receive too great a check.

During the growing period the plants may be syringed whenever the weather is favourable, but this operation must be done with extreme care during the very dull time of late December January, and of course not too heavily. The foliage should be quite dry again by the afternoon, and if it is not dry by this time of the day it would be better to shake the water off gently so that the foliage will not be cold and wet at night. It is quite possible that right in the middle of winter a favourable opportunity for syringing may not occur for a month or more, and if the hot-water pipes were kept very hot during this period an attack of red spider would probably result. We find the best thing to clear red spider is a good strong syringing right under the foliage with a hose-pipe having a nozzle that points upwards at right angles to the spray rod. This will clear the spider right off, and if done on a sunny day the foliage is soon dry again. The same thing can be done on a small scale with an Abol syringe, and of course an insecticide may then be added to the water.

In growing Roses under glass the enemy against which it is, in my opinion, most difficult to guard is mildew, and this can generally be kept away by correct ventilation. The old practice of smearing sulphur on to the hot-water pipes is a good preventive, and it is a good plan to have a little always kept on the pipes; but sulphur must be used with discretion, and a patch about a foot long in every twelve feet or so of piping should be ample; it should of course be put on the flow, not on the return pipe. Campbell's fumigators are also very good, but we find it better to use these little and often, than to use them too much at a time.

Green fly is practically no trouble at all, owing to the many nicotine compounds on the market. Red spider may be troublesome, but it is generally a sign of neglect if it is allowed to get bad.

Black spot is a very bad disease if it appears at all, and certain varieties are more subject to it than others, but if it is remembered that a close, confined atmosphere, with a rather high temperature during the day, and a low temperature at night, will almost certainly cause it to appear, it will be easy to avoid it by avoiding the conditions necessary for its appearance. If a bad attack should come about, really the best thing to do is to throw the plants away, or anyhow to give up all idea of saving that particular crop, and to try to get some growth on for the next crop.

Ample ventilation, a fairly warm temperature, and cutting off of all diseased shoots will probably be sufficient to get rid of the disease if the treatment afterwards is correct; but, as I have already said, if the attack is a bad one it is almost hopeless to expect to save the current crop of blooms.

After the blooms have been gathered the plants will require to be kept well syringed, and also fed up again to induce the second crop, and the treatment required is very similar to that already detailed. The only thing to remember is that the days are now longer and probably much warmer under glass, and that the plants will require rather more watering and syringing. This is a

usual time to get an attack of red spider, and care should be taken to check it immediately it appears. Of course the soil will require stirring up slightly now and again during the growing period, say about once every month or six weeks, but not very deeply—only just enough to loosen the top and to get rid of any weeds. The second crop will be in bloom about April, and the third about the end of June. After this we usually stand our plants outdoors in the full sun, on a well-drained piece of ground, and let them stay there until it is time to bring them in again early in October. During the summer they will require a good deal of water, but we do not plunge them in ashes, as we find the wood ripens better if the plants are left standing open. It is rather more trouble, but the results seem to us to repay it.

If it is not possible to get the Roses into the greenhouse as early as October, they can be brought in at any time up to the end of January, but after November they are better pruned as soon as possible and left to come along slowly, though it is not advisable to prune or top-dress them if the soil is too wet. They should always be left to get moderately dry before doing anything to them.

We may thus summarise our methods: Roses under glass require a well-ventilated house, with plenty of ventilation at the start; a temperature of about 55°; not too much watering or syringing during the winter, though plenty during the spring and summer; a fair amount of manure, which is easily given to them in the water, and special attention to guard against mildew, and in a lesser degree against green fly and red spider.

NEW SEEDLING ROSES IN 1916.

By COURTNEY PAGE, Hon. Secretary.

The year 1916 saw more New Seedling Roses staged for an award than any previous one in the history of the National Rose Society. They reached the record total of 96, and were all of British origin; a fact which would tend to show the enormous strides that have of late years been made by our hybridizers. Not that there has been any startling development, but the wonderful colours that are now obtained in that new race of Roses, Pernetiana, first introduced by our friend and ally, M. Pernet-Ducher, are truly extraordinary, and I think should the weather prove kindly, a mild sensation will this year be created in the New Seedling Rose tent at the Summer Show on the 6th July by an exhibit of a wonderfully coloured Rose belonging to this race.

THE SPRING SHOW.

This was held in the Royal Horticultural Hall on the 16th April, and after the sunless days that had been experienced prior to it, one could hardly have expected a very big display of new Roses. At this show all the Roses staged are grown under glass.

A Gold Medal was awarded to:-

Mrs. Bryce Allan (H.T., A. Dickson & Sons). A fine Rose of vigorous growth, with good beech green foliage. The blooms are carried on long straight stems. They are imbricated, are very finely formed, and have a delicious moss-rose perfume, and the colour is a lovely rich carmine Rose. There is something very attractive about the colour of this Rose, and for bedding and garden purposes it will be in much demand. It is in commerce



COURTNEY PAGE, Honorary Secretary National Rose Society.



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A Certificate of Merit was awarded to:-

W. C. Gaunt (H.T., A. Dickson & Sons). A Rose of moderately vigorous growth, with fine olive-green foliage. The blooms, which are a perfect shape, pointed, and have handsome guard petals, are of delicious Tea-Rose perfume. The colour is a rich bright vermilion, shaded crimson maroon. It is a charming Rose, and its not too vigorous habit will make it a fine bedding variety. It is in commerce.

THE SUMMER SHOW.

The Summer Show was held at the Royal Botanic Gardens on the 30th June. As last year, the date proved all too early for the Irish raisers, and only a moderate number—eighteen—of new varieties were staged.

Gold Medals were awarded to: -

- C. E. Shea (H.T., Elisha J. Hicks). A very fine Rose of strong upright growth, with dark green foliage. The blooms are of a fine elongated form, and carried singly on very long stiff upright stems. The colour is a delightful rich salmon, merging into rosy pink. It is an ideal Rose for growing under glass, and, in addition to its being a very fine bedding variety, will at times be large enough for exhibition. It will also have a great future for market purposes. It is a sport from Mrs. Geo. Shawyer, and will be placed in commerce in June, 1917.
- Nellie Parker (H.T., Hugh Dickson). This is a very fine Rose, of vigorous upright growth, with dark olive-green foliage, which is mildew proof. The blooms, which are very large and of perfect shape, are freely produced on strong upright stems, and sweetly scented. The colour is a pale creamy flesh, with yellow at base, slightly tinted with pale pink on the tips of the petals. This is a beautiful variety, and in addition to its being a very fine exhibition Rose, it is also valuable for garden purposes. It is in commerce.

Certificates of Merit were awarded to:-

- Mrs. A. W. Atkinson (H.T., Chaplin Bros.). A Rose of moderately vigorous upright growth, with dark green leathery foliage, which is mildew proof. The blooms are carried singly on strong upright stems, and are of superb form and fullness. The colour is a pale lemon white. It is a fine exhibition Rose, somewhat after the style of Bessie Brown, and is in commerce.
- Lord Kitchener (H.T., Chaplin Bros.). A Rose of vigorous freebranching habit, with dark green fcliage. The blooms are very freely produced and sweetly scented. The colour is a bright claret-red, and attractive. It is valuable alike for bedding and garden purposes, and a welcome addition to the red Hybrid Teas. It is in commerce.
- Archie Gray (H.T., Hugh Dickson). A Rose of vigorous growth, with fine dark green foliage. The blooms are a very fine pointed form; and freely produced on strong upright stems, and very sweetly scented. The colour is a dark claret. This is a fine all-round Rose, and will prove equally good for both exhibition and garden purposes. It is perhaps best described as a very much darker Mrs. A. E. Coxhead. It will be placed in commerce in June, 1918.

SPECIAL EXHIBITION OF NEW ROSES.

No Provincial Show was held during the year owing to the war. In order to give raisers of New Seedling Roses a further opportunity of staging their productions for an award, the Council decided that if it were possible a special exhibit should be held in the Royal Horticultural Hall. When the Secretary of the Royal Horticultural Society was approached, he willingly co-operated with the Council in this scheme and placed a large table space, at the fortnightly meeting held on the 18th July, at our disposal. No less than 56



EMILY GRAY (HY. MULT.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.

AWARDED THE CORY CUP, SEPTEMBER 19TH, 1916.

Raised by Dr. A. H. Williams, Harrow.





FLAME OF FIRE (PERNETIANA). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.
Raised by Messrs. S. McGredy & Son, Portadown, Ireland.



GLADYS HOLLAND (H.T.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.

Raised by Messis. S. McGredy & Son, Portadown, Ireland.



new varieties were staged, and the experiment proved a huge success.

Gold Medals were awarded to: -

Emily Gray (Hyb. mult., Dr. A. H. Williams). This is a hardy, strong, vigorous climber, with large dark, glossy mildew proof foliage of a fine bronze tone, which is very marked in the younger growth. The blooms are of a medium size, semi-double and deliciously fragrant, and are carried on long-stemmed trusses of any number up to ten. The colour is a rich orange gold, which the blooms retain until well expanded. This is a very fine novelty, and, in addition to receiving a certificate of merit at the Summer Show, it was also awarded the Cory Cup for the best new climbing Rose raised by a British raiser. It may perhaps be described as a glorified "Shower of Gold."

Flame of Fire (Pernetiana, S. McGredy & Son). This is a very fine Rose, of sturdy upright growth, with shiny green foliage. The blooms, which are freely produced on stout stems, are of a medium size, very showy, and sweetly perfumed. The colour is a deep orange flame. This is a very fine decorative and bedding Rose, perhaps best described as an improved Madame E. Herriot. This Rose also received a certificate of merit at the Summer Show in 1915. It is in commerce.

Gladys Holland (H.T., S. McGredy & Son). A Rose of vigorous upright growth, with glossy and practically mildew-proof foliage. The blooms, which are of perfect form and freely produced, are carried on strong upright stems. The colour is a creamy white on the outer petals, centre buff yellow and apricot. It is a very fine exhibition Rose, and will also prove valuable for bedding and garden purposes. It is a good all-round Rose and will be placed in commerce in June, 1917.

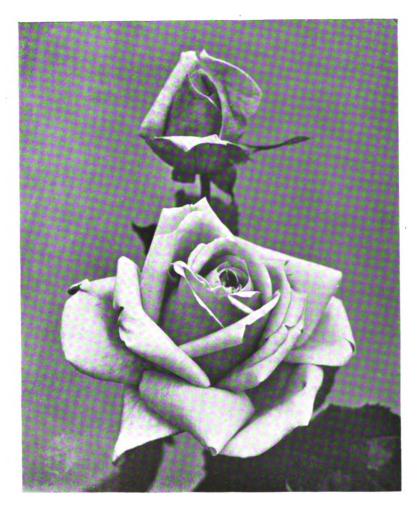
- Miss Willmott (H.T., S. McGredy & Son). A Rose of vigorous branching growth with dark glossy foliage. The blooms are of perfect form, with great depth of petal, very freely produced, and sweetly scented. The colour is a soft creamy yellow, with just the slightest flush of pink at the extreme tips of the petals. It is a fine exhibition and garden Rose. There is a particular charm about this Rose, and I am inclined to think that it will rank as one of the raisers' best efforts. It will be placed in commerce in June, 1917.
- Janet (H.T., A. Dickson & Sons). A Rose of moderate growtin, with good dark foliage. The blooms, which are pointed with thick shell-like petals, are freely produced, carried on long stems well above the foliage, and sweetly scented. The colour of the outer petals is fawn, the centre chrome. This will make a fine bedding Rose, and may perhaps be described as a dwarf Gloire de Dijon, but the blooms do not open flat like that old variety. It is in commerce.
- K. of K. (H.T., A. Dickson & Sons). A Rose of vigorous free-branching habit, with dark green foliage. The blooms, which are freely produced and sweetly scented, are carried on fairly stiff stems. The colour is a brilliant scarlet crimson, which does not burn. It will prove an ideal bedding and decorative Rose, and is a great advance on Red Letter Day. It will be placed in commerce in June, 1917.
- Donald McDonald (H.T., A. Dickson & Sons). Of vigorous growth, with dark green foliage. The blooms are exquisitely formed, abundantly produced on strong stiff stems, and very sweetly scented. The colour, which is most attractive, is glowing carmine, suffused orange. It is a valuable addition to the bedding Hybrid Teas. In commerce.



MISS WILLMOTT (H.T.). GOLD&MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 187H, 1916.

Raised by Messrs. S. McGredy & Son, Portadown, Ireland.





JANET (H.T.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.
Raised by Messis. A. Dickson & Sons, Newtownards, Co. Down.



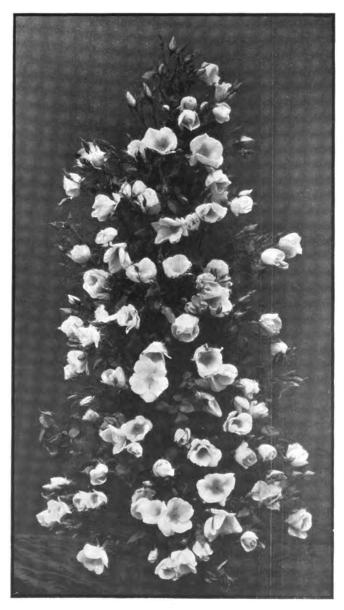




DONALD McDonald (H.T.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.

Raised by Messrs. A. Dickson & Sons, Ltd., Newtownards, Co. Down.

(on to



ULSTER GEM (N.T.). GOLD MEDAL, SPECIAL EXHIBIT OF NEW ROSES, ROYAL HORTICULTURAL HALL, JULY 18TH, 1916.

Raised by Messrs. Hugh Dickson, Ltd., Belfast.

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- Ulster Gem (H.T., Hugh Dickson). A single Rose of moderate growth, with dark green foliage. The blooms are produced with great freedom, both early and late in the season. The colour is a delicate deep primrose yellow, with prominent deep yellow anthers. It is a Rose of compact habit, and will make a very pretty bedding variety. It is in commerce.
- Mrs. Hugh Dickson (H.T., Hugh Dickson). A Rose of strong, free-branching habit, with dark olive-green foliage. The clooms, which are large and perfectly formed, are carried on fairly stiff stems and are sweetly scented. The colour is a pale cream, deeply suffused with orange and apricot. It is a fine bedding Rose, and also valuable for exhibition, and is in commerce.

Certificates of Merit were awarded to:-

- Little Meg (poly. pom., Walter Easlea). This is a very valuable addition to an increasingly popular group of Roses. The growth is dwarf and bushy, with glistening foliage of a light green colour, like Shower of Gold, which is one of its parents. The blooms are very freely produced in big clusters, and are somewhat star shape in form. It continues in flower from June until October, and is semi-double. The colour is a milky white, richly suffused with rosy crimson. It will be valuable for bedding purposes, and also for florists' use, and will be placed in commerce in June, 1917.
- Mrs. Charles E. Shea (H.T., S. McGredy & Son). A Rose of very free-branching growth with glossy foliage. The blooms are very freely produced, of good shape, with outer petals reflexed, and are sweetly scented. The colour is orange-red, shot with glowing scarlet. It is a very fine bedding Rose, and will be useful for massing. This is a novelty of sterling merit, and perhaps represents the most attractive colouring yet seen in Roses. It will be placed in commerce in June, 1917.

- Lillian Moore (H.T., Hugh Dickson). A Rose of vigorous growth, with clear deep-green foliage which is mildew proof. The blooms are very large and double, of imbricated form, while the buds are long and pointed, opening well in all weathers, and are very sweetly perfumed. The colour is pure yellow, shaded to deep cadmium yellow. It is a fine thoroughly perpetual bedding and garden Rose, perhaps best described as a greatly improved Mrs. Aaron Ward. This Rose was awarded the \$1.000 prize as the best new Rose at the Panama Pacific Exhibition by unanimous vote of the International Jury. It will be placed in commerce in June, 1917.
- H. P. Pinkerton (H.T., Hugh Dickson). Of strong, vigorous branching habit, with dark green foliage which is mildew proof. The blooms, which are very large, with high pointed centre, are freely produced and carried on erect stiff stems, and are very sweetly perfumed. The colour is a very brilliant scarlet, heavily flushed with velvety crimson. This will make a grand exhibition and garden Rose; and is undoubtedly the finest Rose of its colour yet produced. It will be placed in commerce in June, 1918.
- E. H. T. Broadwood (H.T., Hugh Dickson). Of moderately vigorous branching habit, with olive-green foliage. The blooms, which are nicely pointed, are of a medium size, and produced in great abundance, on fairly strong stems. They are very sweetly perfumed. The colour is a deep orange-yellow, flushed rosy pink. It is a very attractive and ideal garden and bedding Rose, and will be placed in commerce in 1919.
- C. K. Douglas (H.T., Hugh Dickson). Of vigorous upright growth, with large, handsome mildew-proof foliage. The blooms are moderately full, with large shell petals of great substance, and are carried on stiff stems well above the foliage. The colour is a dazzling scarlet-crimson, which does not fade. It is a very attractive garden and bedding Rose, and will be placed in commerce in June, 1918.

- Chrome (H.T., B. R. Cant & Sons). Of branching bushy habit of growth, with deep bronzy green foliage. The Llooms are of a medium size, and good shape. The colour in the bud is a deep chrome yellow, changing to clear yellow and orange as the bloom expand. This should prove a good decorative Rose. It is not yet in commerce.
- Mrs. C. E. Salmon (H.T., Frank Cant & Co.). Of vigorous free-branching habit, with dark green foliage. The blooms, which are single, are produced in trusses well above the foliage. The colour is a delightful salmon pink. This will prove to be an excellent Rose for decorative purposes, and on account of its lasting qualities will make a good bedding variety. It is particularly good in the autumn, and will be placed in commerce in June, 1917.

THE AUTUMN SHOW.

The Autumn Show was held at the Royal Horticultural Hall on Tuesday, the 19th September, but, unfortunately owing to the wet and cold weather that prevailed for some days prior to the show, very few new varieties were staged.

A Gold Medal was awarded to:--

Christine (H.T., S. McGredy & Son). A very fine Rose, of vigorous bushy habit, free and uniform, with stout and glossy foliage, which is mildew proof. The blooms, which are very freely produced and of faultless shape, are carried on long stiff stems, well above the foliage. They are very sweetly scented. The colour is a very rich burnished gold, which the flower retains until the petals drop. This is a fine bedding and decorative Rose, probably the best yellow Rose introduced since the advent of Lady Hillingdon. It will be placed in commerce in June, 1918.

Certificates of Merit were awarded to:-

Blush Queen (H.T., Frank Cant & Co.). Of vigorous, upright growth, with dark green foliage. The blooms, which are very freely produced, are of a perfect shape, with enormous petals, and carried erect on long stiff stems. The colour is a creamy white, shaded blush. It is a very fine exhibition and garden Rose, especially good in autumn, and will be placed in commerce in June, 1917.

Louise Baldwin (H.T., S. McGredy & Son). Of vigorous growth, with deep bronze-green foliage. The blooms, which are of a medium size and good shape, are very freely produced, and carried on long wiry stems. The colour is a very fine orange-apricot, which is quite unique in tint. It will prove a very fine bedding Rose. It will be placed in commerce in June, 1918.

As last year, the decorative varieties again hold the field, no less than 19 having received awards, as compared with eight exhibition varieties, the best of which are Nellie Parker, H. P. Pinkerton, Gladys Holland, and Miss Willmott. But still here there is a great improvement, as with one exception every exhibition Rose that has received an award is equally suitable for garden purposes, and our hybridizers are to be congratulated upon their efforts towards the ideal—Roses that are equally good for exhibition and garden purposes and fragrant.

OBITUARY.

HERBERT E. MOLYNEUX.

With great regret we have to record the death of Mr. Herbert E. Molyneux. One of the many disciples of the late Mr. Edward Mawley, he was an ardent Rose-lover and for many years took an active interest in the affairs of the National Rose Society. For four years, 1904-8, he discharged with conspicuous success the duties of Hon. Treasurer, besides which he was an untiring worker in connection with the publications issued by the Society.

He was a charming writer on Rose subjects, and his articles on the newer Roses were always especially welcome, for he combined gifts of observation and critical appreciation with powers of appropriate and attractive description.

When he was living at Purley his enthusiasm was infectious, resulting in the inception and success of the Purley Rose and Horticultural Society, one of the most flourishing local societies of its kind. Latterly he had been residing at Southampton, where he died at the age of 48.

A pleasant personality, a cheery and agreeable companion, he was an example of the indomitable spirit in a not too robust frame. He put up a great fight against physical weakness, obvious to his friends, never admitted by himself, and circumstances which might have daunted a less courageous mortal only seemed to bring out qualities which endeared him to a large circle of friends.

E. J. H.

ROSE ANALYSIS, 1916.

By COURTNEY PAGE, Hon. Secretary.

For the last twenty-nine years this analysis has appeared over the name of one who has always been held in the greatest esteem by all Rose-lovers, and who, after many years of untiring labour in the interest of his favourite flower, has recently been gathered to his fathers. Year by year, as the Rose Analysis is carried on, the name of Edward Mawley will ever be associated with it, and deservedly so, for it is entirely owing to his untiring energies that the records of past years were made and kept up to date. addition to his being a Rose expert, Mr. Mawley was also a weather expert, and as successful Rose-growing largely depends upon the weather, he, from his records, was enabled to give us a complete account of its vagaries during the particular year under review. I shall have to rely upon my own notes, which are somewhat scanty. Taking it on the whole, the past season was perhaps the worst I ever remember for Roses. The year 1912 was a bad one, but 1916 will. I think, hold the record. The winter was unusually mild, and the Roses kept on growing well into December, consequently many of the shoots never properly ripened. After pruning-time the weather still remained wet and cold, and continued so, more or less, nearly up to the end of May. June, always the most critical month for Roses, opened warm, but soon changed, and the consequence was that the plants which had made a fair amount of growth had a severe check from which they never really recovered. The leading exhibition of the National Rose Society was held on June 30th, a date far too early for most Rosarians. The previous day there was a succession of heavy thunderstorms, and these circumstances, combined with the lateness of the season, somewhat spoiled the show, and it was consequently the smallest ever held at the Royal Botanic Gardens.



LOUISE BALDWIN (H.T.). CERTIFICATE OF MERIT, AUTUMN SHOW,
SEPTEMBER 19TH, 1916.
Raised by Messrs. S. McGredy & Son, Portadown.



In order that the following table of Hybrid Perpetuals and Hybrid Teas, and also that of the Teas and Noisettes, may be clearly understood, it has been thought advisable at the outset to explain the system upon which they have been compiled. For the last thirty years the name of every Rose in the first, second and third prize stands has been taken down at the great Rose Show of the year held annually at the Royal Botanic Gardens. The results obtained have each year been tabulated, and the varieties arranged in the published tables according to the average number of times every Rose was staged at the last six exhibitions. This applies to nearly two-thirds of the Roses which find places in the two tables. For the sorts of more recent introduction the longest trustworthy averages are given instead; while the still newer varieties are placed according to their records for the last exhibition alone.

Hybrid Perpetuals and Hybrid Teas.

As in previous years, the varieties in the accompanying table of Hybrid Perpetuals and Hybrid Teas have been arranged according to the number of times they were staged in the prize stands at the last six exhibitions of the National Rose Society. This year Dean Hole has displaced Frau Karl Druschki, which for the last four years has headed the list; while Mildred Grant still occupies the position it has now held for four years.

On comparing the first twelve varieties in this year's table, we find two varieties have had to go down—one our old favourite Hybrid Perpetual Mrs. John Laing, and the other Florence Pemberton, their places being taken by Mrs. J. H. Welch and H. V. Machin respectively. In the next twelve varieties in the present table Florence Pemberton takes the place of Mrs. J. H. Welch, which has risen to No. 7; those two one-time favourites, Ulrich Brunner and Her Majesty, are displaced by Mrs. John Laing and Gloire de Chédanc-Guinoisseau; while the two new-comers in last year's table which owed their position to the one show only—Mrs. A. Carnegic and Coronation—are displaced by Mélanie Soupert and Mrs. Amy Hammond.

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Position in present Analysis.	Average No. of Times Shown.	No. of times shown in 1916 in True Relative Proportion to the Avrg.	NAME.	Date of Introduction,	Raiser's or Introducer's Name.	COLOUR.
ı	43'5	38	Dean Hole, H.T	1904	A. Dickson & Sons	Pale silvery rose, deeper shaded
2	39'7	23	Frau Karl Druschki, H.P.	1900	P. Lambert	Pure white
3	38.5	47	Mildred Grant, H.T		A. Dickson & Sons	Ivory white, tinted peach Salmon rose, suffused yellow
4	34.8 34.2	54 77	Lyon Rose, H.T	190 7 1906	A. Dickson & Sons	Creamy pink
5	32.0	30	George Dickson, H.T	1912		Deep velvety crimson, heavily
7	30.3	30	Bessie Brown, H.T.	1899	A. Dickson & Sons	veined Creamy white
7	30.3	49	Mrs. J. H. Welch, H.T	19:1	S. McGredy & Son	
9	29.5	30	Hugh Dickson, H.P	1904	Hugh Dickson	Crimson, shaded scarlet
10	29.5	34	Mrs. T. Roosevelt, H.T	1903	The E. G. Hill Co.	Flesh, tinted pink
112	27.8 25.0	30	J. B. Clark, H.T	1905 1914	Hugh Dickson A. Dickson & Sons	Scarlet crimson, shaded plum Scarlet crimson
12	23.0	25 15	Florence Pemberton, H.T.	1902	A. Dickson & Sons	Creamy white, edged blush
*14	23 0	23	Augustus Hartmann, H.T.		B. R. Cant & Sons	Brilliant metallic red
15	21.8	4	Mrs. John Laing, H.P!	1887	Bennett	Rosy pink
16	19.5	30	Mrs. A. E. Coxhead, H.T.	1910	S. McGredy & Son	
17	19.5 18.0	23 26	Lady Ashtown, H.T	1904	A. Dickson & Sons	
19	17.8	32	Mabel Drew, H.T. Caroline Testout, H.T.	1800	A. Dickson & Sons Pernet fils-Ducher	Bright warm pink
20	17.7	20	Gloire de Chédanc-Guinoisseau,		Chedane-	z i g i i i i i i i i i i i i i i i i i
			п.г,	1907	Guinoisseau	Crimson
21	16.2	17	Avoca, H.T	1907	A. Dickson & Sons	Rich crimson
22	16.3	51	Mélanie Soupert, H.T	1905	Pernet-Ducher	Pale sunset yellow, suffused amethyst
23	15.3	28	Mrs. Amy Hammond, H.T.	1911	S. McGredy & Son	
23	15.3	19	Mrs. Cornwallis West, H.T.		A. Dickson & Sons	White, pink centre
*25	15.0	15	Florence Forrester, H.T	1914	S. McGredy & Son	Pure white
26 27	14'7	2	Ulrich Brunner, H.P.	1881	Levet	Cherry red
*25	13.0	13	Her Majesty, H.P Mrs. Charles Russell, H.T	1885 1913	Bennett Waban	Pale rose
	1	-3	MITS. Charles Russen, II. 1.	1913	Conservatories	Rosy carmine, deeper centre
*28	13.0	13	Mrs. Andrew Carnegie, H.T	1912	J. Cocker & Sons	Creamy white
30	12.0	15	Edward Mawiey, H.T.	1911	S. McGredy & Son ;	
31	11.0	17	Mrs. George Shawyer, H.T.	1911	Lowe & Shawver B. R. Cant & Sons	
·32	11.0	11	Elizabeth, H.T	1911	Elisha J. Hicks	Bright rich pink
32	11.0	25	Mrs. W. J. Grant, H.T	1895	A. Dickson & Sons	Deep rosy pink
35	10.8	4	Horace Vernet, H.P	1866	Guillot	Scarlet crimson, dark shaded
35	10.8	1 .4	Dr. O'Donel Browne, H.T.	1008	A. Dickson & Sons	
35 38	10.2	15	Jonkheer J. L. Mock, H.T St. Helena, H.T	1909 1912	B. R. Cant & Sons	Cream, tinged yellow, soft pink
39	10.3	13	Mrs. Stewart Clark, H.T	1907		Bright cerise pink
39	10.3	13	Yvonne Vacherot, H.T			Porcelain white, tinted blush
41	9.5	4	A. K. Williams, H.P	1877		, Crimson Salmon pink, shaded rose
41 41	9°5	2	Earl of Warwick, H.T Oberhofgärtner Terks, H.T	1001	Welter	Ivory white, tinted lilac
44	9.3	3 6	Lady Barham, H.T.		A. Dickson & Sons	Salmon pink
45	9.0	9	Colleen, H.T	1914	S. McGredy & Son	Brilliant rose, shaded pink rose
.45 15	6.0 6.0	9	Edgar M. Burnett, H.T Gorgeous, H.T	1914	S. McGredy & Son Hugh Dickson	Orange yellow, flushed reddis
	0.5		Alice Lindsell, H.T	1902	A. Dickson & Sons	Creamy white, pink centre
48	8·5 8·5	3	Gustave Piganeau, H.P		Pernet fils Ducher	Carmine, shaded lake
48 50	8.3	13		1901	A. Dickson & Sons	Duil rose carmine
51	8.3	13	Mainte H.T	1908	A. Dickson & Sons	
152	8.0	13	Mrs. Charles Reed, 11.1.	1914	Elisha J. Hicks A. Dickson & Sons	Pole cream, tinted peach Flesh pink
53	7.8	8 2	Alfred Colomb, H.P.		Lacharme	
5 \$	7.2	3	Lohengrin, H.T		Schmidt	Silvery pink
54 56	7.0	6	British Oucen, H.T	1912	S. McGredy & Son	Creamy white
57	6.8	8	Ethel Malcolm, H.T	1910	S. McGredy & Son	White, shaded blush
57	6.8	2	Lady Moyra Beauclerc, H.T		A. Dickson & Sons	Madder rose, with silvery reflex
57	6.8	2	Mrs. J. Bateman, H.T Suzanne Marie Rodocanachi, H.P.	1905	A. Dickson & Sons Lévêque	Glowing rose
60 61	6.3	11	Oueen of Spain, H.T		S. Bide & Sons	Pale flesh
	6.0	6	Mrs. R. D. McClure, H.T	1913	Hugh Dickson	Clear pink
02					1 A 13' 1 P. C	
62 •63	5'7 5'2	. 6 3	Mrs. David M'Kee, H.T.	1904	A. Dickson & Sons B. R. Cant & Sons	Creamy yellow

^{*} New varieties, whose positions are dependent on their records for the 1916 Show only.



CHRISTINE (H.T.). GOLD MEDAL, AUTUMN SHOW, SEPTEMBER 19TH, 1916.
Raised by Messrs. S. McGredy & Son, Portadown, Ireland.



That fine exhibitor's Rose, Dean Hole, which heads the list this year, and Frau Karl Druschki, which it displaced, have the lowest actual record for the last eight years; while Mildred Grant, which is third in the table, has only once before—in 1918—been so frequently exhibited.

The following established varieties have never before been so frequently staged: William Shean, Lyon Rose, Mrs. J. H. Welch, Mélanie Soupert and Mabel Drew; while, on the other hand, Her Majesty, Mrs. J. Laing, A. K. Williams and Ulrich Brunner have never been so sparsely shown.

In his analysis last year Mr. Mawley drew attention to the remarkable decline in the number of Hybrid Perpetuals in the table. This is due to the rapid advance made by the Hybrid Tea, which not only gives a longer flowering season, but a bigger and more refined range of colour as well. In the analysis for 1912 there were twenty-three Hybrid Perpetuals included, while in the table for the present year the number is reduced to eleven. The principal changes worth mentioning are Ulrich Brunner, which this year drops from No. 16 to No. 26; Horace Vernet, from No. 25 to No. 35; Dr. O'Donel Browne, from No. 27 to No. 35; that one-time favourite, A. K. Williams, from No. 28 to No. 41; Gustave Piganeau, from No. 33 to No. 48; Alfred Colomb, from No. 42 to No. 54; and Suzanne Marie Rodocanachi, from No. 42 to No. 60. On the other hand, Mrs. George Shawyer goes from No. 45 to No. 31, Mélanie Soupert from No. 37 to No. 22; and Mrs. Amy Hammond from No. 41 to No. 23.

Mr. Mawley always sounded a note of warning to those Rose-growers who were not exhibitors, in that Roses that they saw so very finely exhibited at the shows were not all suitable for general garden cultivation. Such Roses as Frau Karl Druschki, Mrs. John Laing, Caroline Testout, Ulrich Brunner, Mabel Drew, Hugh Dickson, Lady Ashtown and Mrs. A. F. Coxhead are among the best varieties for general garden cultivation; while varieties such as

Bessie Brown, Dean Hole, Horace Vernet, Gloire de Chédane-Guinoisseau, William Shean and Mrs. Cornwallis West excellent as exhibition Roses, are quite unsuitable for general garden cultivation.

The Newer Hybrid Perpetuals and Hybrid Teas.

In this analysis by "newer" Roses is meant those varieties that are five or fewer years old. In the table of Hybrid Perpetuals and Hybrid Teas there are twenty-two Roses entitled to be so classed, or one less than in last year's. Taking the varieties (eight) first distributed in 1911, Mrs. J. H. Welch, rose pink with enormous petals, has this year risen from No. 14 to No. 7. Mabel Drew, a lovely creamy vellow quite superseding Kaiserin Augusta Victoria, has this year gone from No. 23 to No. 18. Mrs. Amy Hammond, cream, shaded amber, has this year risen from No. 41 to No. 23. Mrs. Cornwallis West, pearly white, purely an exhibitor's Rose, has practically remained stationary at No. 23. That fine rich crimson Rose Edward Mawley has this year risen from No. 33 to No. 30. Mrs. George Shawyer, pale rose, has this year risen from No. 45 to No. 31. On the other hand, Elizabeth, rose pink, has this year dropped from No. 29 to No. 32. Lady Barham, salmon pink, an enormous flower that requires a hot season to open well, has this vear dropped from No. 29 to No. 44.

Of the four varieties that were sent out in 1912, the lovely dark velvety crimson Rose George Dickson has dropped from No. 4 in last year's table to No. 6, but it is certain to improve on that figure next year. Mrs. Andrew Carnegie, creamy white, purely an exhibitor's Rose, has this year fallen from No. 13 to No. 28. St. Helena, cream, tinged yellow, has this year risen from No. 47 to No. 38; while that lovely white variety British Queen has this year dropped from No. 47 to No. 56.

Of the three varieties sent out in 1913, Coronation (H.T.), pale rose pink, which first made its appearance in last year's table at No. 17, disappears from this year's table, it only being exhibited

in three prize stands this year. This can only be temporary, and one will expect its return with flying colours next year. Mrs. R. D. McClure, salmon pink, also narrowly escapes, having dropped from No. 57 to No. 62; while, on the other hand, Mrs. Charles Russell, a new-comer last year, a lovely carmine rose, has this year deservedly risen from No. 57 to No. 28.

Of the varieties first distributed in 1914, H. V. Machin, a lovely scarlet crimson, has this year risen from No. 29 to No. 12. That fine brilliant metallic red Rose Augustus Hartmann has risen from No. 21 to No. 14. Florence Forrester, of the purest white—a much better flower than Frau Karl Druschki—has this year made a tremendous leap from No. 52 to No. 25. It is a pity that the above three fine Roses are not better growers. That lovely Rose Mrs. George Norwood, bright rich pink, exquisitely scented, has fallen from No. 29 to No. 32. Colleen, brilliant rose, shaded pink, with huge shell petals; and Edgar M. Burnett, flesh, tinted rose, a huge flower, sweetly scented, take their places at No. 45. Mrs. Charles Reed, a very pretty Rose, pale cream, tinted peach, and a good grower, takes its place at No. 52.

The year 1915 is only represented by one variety, Gorgeous, orange yellow, flushed red, which appears at No. 45. This is a very fine Rose which is certain later on to take a much higher place.

With one exception the whole of the before-mentioned twentytwo Roses were raised in the British Isles.

Further particulars of the newer Roses will be given in the "Special Audit of the Newer Hybrid Perpetuals and Hybrid Teas" in Table IV.

Teas and Noisettes.

This section is becoming more and more vigorous every year, owing to the introduction of new varieties containing a large amount of Hybrid Tea blood, and of much stronger growth with enormous

blooms. In fact, one now finds it a difficult matter to know really where the Hybrid Teas end and the Teas start. In the present analysis all the varieties which are sufficiently old to allow of this being done have been arranged according to their average performances at the last six exhibitions.

After a reign of thirteen years—unlucky number !—that sterling old variety White Maman Cochet has been displaced by Mme. Jules Gravereaux and Mrs. Foley Hobbs, but it is only fair to note that although White Maman Cochet has had to take third place in the present table after having kept its position so long, it still runs very closely that grand variety—perhaps the finest Rose the raisers have ever produced—Mrs. Foley Hobbs, ivory white, shaded, now standing at No. 2.

Table 2.—TEAS AND NOISETTES.

68 5 50 17 13 11	Madame Jules Gravereaux Mrs. Foley Hobbs White Maman Cochet Maman Cochet	1901 1910 1897	A. Dickson & Sons	Flesh, shaded yellow Ivory white
5 50 17 13 11	Mrs. Foley Hobbs White Maman Cochet	1910	A. Dickson & Sons	
17	White Maman Cochet			
.3 11			Cook	White, tinged lemon
		1893	Cochet	Deep flesh, suffused light
		- 55		rose
7 18	Mrs. Edward Mawley	1899	A. Dickson & Sons	Pink, tinted carmine
3 26	Madame Constant Soupert	1905	Soupert et Notting	Deep yellow, shaded peach
0 32	Molly Sharman-Crawford	1908	A. Dickson & Sons	White, shaded eau-de-nil
0 22	W. R. Smith	1908	Henderson	White, tinged blush
2 9	Souvenir de Pierre Notting	1902		Apricot yellow, shaded
	."	-		orange
ro 5	Mrs. Myles Kennedy	1906	A. Dickson & Sons	Creamy white
5 21	Medea	1891	W. Paul & Son	Lemon yellow
6 8	Mrs. Hubert Taylor	1909	A. Dickson & Sons	Creamy white, suffused pale
				rose
7 18		1908		
3 23		1911		
0 2				Peach, shaded apricot
n 2	Muriel Grahame			
	Mrs. Dudley Cross			
·o 2				Deep bright golden yellow
0 7				
				Madder rose, fawn shaded
·3 i	The Bride			
.2 0				Pale rose pink
.2 2		1846	Belot-Defougère	
	Souvenir d'Elise Vardon	1854	Marest	Cream, with rosy tint
	6 8 7 18 23 2 23 2 2 2 2 2 2	Mrs. Hubert Taylor Nita Weldon Alexander Hill Grav Comtesse de Nadaillac Comtesse de Nadaillac Muriel Grahame Mrs. Dudley Cross Maréchal Niel, N. Mrs. Herbert Hawksworth Auguste Comte The Bride Catherine Mermet Souvenir d'un Ami	Mrs. Hubert Taylor 1909	Mrs. Hubert Taylor 1909 A. Dickson & Sons 18

^{*} A new variety, whose position is dependent on its record for the 1916 Show only,

In this table the alterations are very few. Alexander Hill Gray, deep lemon yellow, has this year risen from No. 20 to No. 14; while Muriel Grahame, Comtesse de Nadaillac, 'The Bride and Catherine Mermet were never before so sparsely shown. Souvenir d'Elise Vardon, which disappeared from last year's analysis, has reappeared at No. 24, displacing that fine old white variety Souvenir de S. A. Prince. There is only one new-comer—Mrs. Herbert Hawksworth, creamy white—which on its first appearance takes up a place in the table at No. 18.

Decorative Roses.

We now come to the decorative Roses. By this term is meant those varieties that are not sufficiently large or regular in form to allow of the individual blooms being staged singly at shows, like the exhibition varieties.

In the preceding table the varieties are arranged according to the number of times they have been staged in the prize-winning stands during the last six summer exhibitions of the National Rose Society. For the varieties of more recent introduction the longest trustworthy averages are given instead, and no Rose is included that has not been staged at one or other of the six shows three or more times.

Blush Rambler still heads the list, followed by Irish Fireflame, Mmc. Edouard Herriot, Hiawatha and Irish Elegance. That fine new Rose Irish Fireflame, a lovely orange copper sport from Irish Elegance, has at the first time of asking taken its place in the table at No. 2, being bracketed with Mme. Edouard Herriot, terra-cotta, introduced in the same year. Taking the dwarf varieties first, Irish Elegance has this year risen from No. 11 to No. 5; Old Gold, from No. 23 to No. 10; while, on the other hand, Rayon d'Or has fallen from No. 3 to No. 7; Mme. Abel Chatenay, from No. 6 to No. 18; and Lady Hillingdon, from No. 11 to No. 14. Mme. Ravary, which in last year's table stood at No. 15, now disappears from the

analysis. Arthur R. Goodwin and Orleans Rose, too, have each to register falls.

Among the climbing varieties Albéric Barbier has risen from No. 19 to No. 12; Gardenia, from No. 28 to No. 17; and Trier, from No. 23 to No. 18; while, on the other hand, Excelsa has fallen from No. 9 to No. 16; and Crimson Rambler, from No. 5 to No. 21. Of the Dwarf Roses most frequently staged in recent years, Mme. Edouard Herriot heads the list, closely followed by Irish Elegance and Rayon d'Or. The audit of the newer decorative Roses will be given in Table VI.

Table 3.-DECORATIVE ROSES.

		No. of			Date of Introduction.	COLOUR.
	0.0	1	Blush Rambler, nult. rambier	1	1903	Blush rose
*2	8.0	8			1913	
*2	8.0	8	Mme. E. Herriot, pernetiana	••	1913	Terra-cotta, passing to strawberry
4	7'5	o	Hiawatha, wich		1905	Rich crimson, with white eye
5	6.8	14	Irish Elegance, H.T		1905	Shades of apricot
	6.4	4	American Pillar, wich		1909	Clear rose, pink centre
7	6.0	3			1910	Bright golden and canary yellow
8	5'5	0			1905	Rose pink
8	5.2	0			1901	Rose pink
10	5.0	5	and a new me		1899	Rich yellow, opening to cream Old gold, tinged scarlet
10	5°0	5 3	Albert Deskins with		1913	Yellow buds, changing to creamy
12	10	٠,	moeric Barbier, wien	••	1900	white
13	47	3	Léontine Gervais, wich		1905	Salmon rose, tinted vellow
14	4.2	3	1 a.d., 11:00:		1910	Bright golden yellow, shaded fawn
14	4.5	4	Mrs. Herbert Stevens, T	!	1910	White
16	4.4	o			1909	Bright rosy crimson
17	4'3	4			1899	Bright yellow, changing to cream
18	4'2	1			1895	Pale salmon pink, deeper centre
18	4'2	3			1909	Coppery salmon, shaded fawn
18	4'2	5			1904	Creamy white, edged fawn
21	4'0 3'7	ŭ			1893 1910	Crimson Coppery orange, passing to flesh
22	3.7	3	Man W H Continuel and annual		1906	Bright deep pink
24	3.6	0	Ostana Bana anti-		1909	Vivid rosy crimson
25	3.2	o	7 . 1. C . 1'		8001	Pale blush, deeper centre
26	3.2	2	Constant Director II T		1890	Nankeen yellow
27	3.0	1		1	1907	Light scarlet
27	3.0	4			1910	Delicate coppery salmon
27	3.0	2			1905	Deep pink
27	3.0	4			1905	Deep pink
27	3.0	0	White Dorothy, wich	••	1908	Pure white

^{*} New varieties, whose positions are dependent on their records for the 1916 Show only.

An Audit of the Newer Roses.

The audit given below is for new varieties of recent introduction, most of which it is impossible to place accurately in the table owing to their limited records. Each of the voters was requested to place the twenty-three Hybrid Teas on the audit paper in what he considered their order of merit, and to treat the Teas and decorative Roses in a like manner:—

Table 4.—SPECIAL AUDIT OF THE NEWER HYBRID TEAS.

Position in Audit.	NAM	E.					Total Number of Votes.	Votes by Amateurs.	Votes by Nurserymen.
1	George Dickson (1912)						845	416	429
2	H. V. Machin (1914)						779	408	371
3	Augustus Hartmann (1914)		• •		• •		714	362	352
4	Florence Forrester (1914)						683	382	301
5	Mabel Drew (1911)						676	375	301
6	Lady Barham (1911)						571	287	284
7 8	Mrs. J. H. Welch (1911)						568	336	232
	Mrs. Amy Hammond (1911)						544	267	277
9	Mrs. George Norwood (1914)		• •			[538	267	271
10	Gorgeous (1915)		• •				195	228	267
11	Colleen (1914)						460	219	211
12	St. Helena (1912)		• •				452	226	226
13	Edgar M. Burnett (1914)						448	2 6 0	188
14	Mrs. Andrew Carnegie (1913)						423	225	198
15 16	Mrs. Cornwallis West (1911)					· · i	393	217	176
16	Mrs. Charles Russell (1913)					}	387	204	ز18
17	Mrs. R. D. McClure (1913)						384	208	176
18	Edward Mawley (1911)			• •		• • •	383	191	192
19	British Queen (1912)	••				• • •	372	196	170
20	Mrs. George Shawyer (1911)						361	192	169
21	Freda (1911)	• •					267	172	95
22	Elizabeth (1911)						256	168	88
23	Mrs. Charles Reed (1914)						199	99	100

Table 5.—SPECIAL AUDIT OF THE NEWER TEA ROSES.

1	Mrs. Foley Hobbs (1910)	 				198	104	. 01
2	Alexander Hill Gray (1911)	 				143	76	67
3	Mrs. Herbert Stevens (1910)	 				102	55	47
Ă	Mrs. Hubert Taylor (1009)	 				84	46	38
3	Mrs. H. Hawksworth (1912)	 ••	••	• •		78	39	39
		 			1	!		

Table 6.—SPECIAL AUDIT OF THE NEWER DECORATIVE ROSES.

Dwa		37 -	_1_	. 4 1	 _
LIWA	PT	Y R	PIC	a Ca	٨.

Climbing Varieties.

Position in Audit.	NAME.	No. of Votes.	ın Audit	NAME.		No. of
1 2 3 4 5 5 7 8 8 8 8 HI 12	Madame Edouard Herriot (1913). Pernetiana Red Letter Day (1914), H.T. Rish Fireflame (1913), H.T. Old Gold (1913), H.T. Ophelia (1912), H.T. Princess Mary (1915), H.T. Mrs. Wemyss Quin (1914), H.T. Mrs. C. E. Pearson (1913). Pernetiana Louise Catherine Breslau (1912), Pernetiana Queen Mary (1913), H.T. Queen Mary (1913), H.T. Cherry Page (1914), H.T.	s	Paul's L Moonlig Paul's S wich. Coronat Climbin Danáe (: Climbin H.T. Mrs. Ro Pink Pe	g14), H.T. emon Pillar (1915), H.N. ht (1913), Hybrid Musk carlet Climber (1916), H ion (1912), wich. g Richmond (1912), H.T i913), Hybrid Musk g Melanie Soupert (1 salie Wrinch (1915), H. arl (1012), Hybrid Briar toon (1912), wich. e H. Veitch (1911), H.T.	914). T	20 20 19 17 14 14 11 8 7

The Voters.

AMATEURS.—W. Boyes, S. W. Burgess, the Rev. F. R. Burnside, H. R. Darlington, R. de Escofet, F. Dennison, Dr. J. C. Hall, G. A. Hammond, E. J. Holland, R. F. Hobbs, Dr. C. Lamplough, O. G. Orpen, the Rev. F. Page-Roberts, the Rev. R. Powley, the Rev. J. B. Shackle; F. Slaughter, G. Speight, H. L. Wettern, Dr. A. H. Williams and C. C. Williamson.

NURSERYMEN.—G. Burch, C. E. Cant, Frank Cant, A. Cocker, A. Dickson, Hugh Dickson, E. Doncaster, Henry Drew, Walter Easlea, John Green, Elisha J. Hicks, W. J. Jefferies, J. R. Mattock, S. McGredy, T. W. Piper, A. E. Prince, W. D. Prior, G. M. Taylor, and A. Turner.

ROSES. Table 7.—AUTUMN FLOWERING

6	Hybrid Hy	Perpetuals and ybrid Teas.		Ĥ	•	Teas and Noisettes.			900	Decorative Roses.
	No. of Times. Shown in 1916.	Namc.	Position in Present Analysis.	Average Number of Times Shown in the last Six Years.	No. of Times. Shown in 1916.	Name.	Position in Present Analysis.	Average Number of Times Shown in the last Six Years.	No. of Times Shown in 1916.	Маше.
	# H H 4 W W H W 4 4 4 H H 2 4 W H H 4 0	Frau Karl Druschki Hugh Dickson Caroline Testout Mra. John Laing Beasie Brown William Shean Dean Hole Lyon Rose Fforence Pemberton Lady Ashrown Midred Grant Wirch Brunner Earl of Warwick Mrs. George Norwood George Dickson Madame Wagram Avoca Melanie Soupert Lady Ursula	H 4 10 4 20 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11 12 12 12 12 12 12 12 12 12 12 12 12 1	∾∺ №0 ∞ ८ ०० ० ०० ०० ०	White Maman Cochet Madame Jules Gravereaux Mannan Cochet W. R. Smith Mrs. Foley Hobbs Madame Constant Soupert Souvenit de Pierre Notting Alexander Hill Gray Mrs. Edward Mawley Molly Sharman-Crawford Lady Hillingdon Madame Hoste Madame Hoste Marie Van Houtte Mrs. Myles Kennedy	- ఆటీట నుండు అతి అతి చెప్పున్ 7 జ్ఞ్రీ కో కో	4 W 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	Madame Abel Chatenay, H.T. La Tosca, H.T. La Tosca, H.T. Madame Edouard Herriot, pernetiana Madame Antoine Mari, T. Madame Antoine Mari, T. Madame Pan Dupuy, T. Orleans Rose, poly. pom. Lady Pirrie, H.T. Lady Pirrie, H.T. Leady Pirrie, H.T. Jessie, poly. pom. Louise C. Breshau, pernetiana Rayon d'Or, permetiana Old Gold, pernetiana Old Gold, pernetiana C. Breshau, pernetiana Rayon d'Or, poernetiana Earlate, H.T. Berlet M.T. Berlet M.T. Sunhurst, H.T. Cinsie Balgarie, H.T. Prince de Balgarie, H.T. Cinsie Easlea, pernetiana Gritsa an Teplitz, H.T. Madame Ravary, H.T.

Autumn-flowering Roses.

The above term would appear to be somewhat misleading, because with the advent of the Hybrid Teas, which flower with equal freedom right through the summer as well as the autumn, it is now possible to have Roses almost up to Christmas. The Hybrid Teas have been a very great gain to the Rose world, and have gone a long way towards raising the Rose to the high popular position it holds to-day, a position quite unassailable by any other flower.

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,, ,, ,, Holland House Show, 1915, for Collection of Eremurus and other Hardy Flowers.

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Very free in flowering when established, and will prove a valuable climber on walls, as it is a colour much needed for this purpose, also suitable for pegging down in beds.

FLORENCE SPAULL. **5**/- ' Hybrid Tea. Of erect and even habit of growth, with good foliage.

The blooms are very full and large, "Helen Keller" in type, but higher centre

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Colour-Deep rose-pink, with occasional splashes of darker tint on the edges of the outer petals, which are nicely reflexed.

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Colour-Outer petals porcelain flesh, centre deep orange yellow. The flowers open well and cleanly, giving the whole bloom a beautiful porcelain appearance. Most useful for bedding and massing, and a good Autumnal.

- 2/6 A pillar Rose of fine growth, good CUPID. Hybrid Tea. habit and abundant foliage, the flowers are single, four to five inches across, sometimes larger, and produced in clusters. The colour in the half developed stage is a glowing flesh, with a touch of peach, softening to delicate flesh and opal when fully expanded. In the autumn it produces pretty rose coloured seed pods. This variety was greatly admired and caused quite a sensation at the exhibitions during the summer of 1914, and received unanimous Award of Merit Royal Horticultural Society, 1914.
- 2/6: SALLIE. Hybrid Tea. A fine grower with good bronzy-green stout foliage, apparently mildew-proof. The flowers are large and full, outer petals creamy flesh, gradually deepening towards the centre of the bloom with splashes of rich yolk of egg colour. Very attractive for bedding and massing, and an excellent Autumnal. Awarded first prize at the International Show, Chelsea, 1912, as the best new Rose not then in commerce.

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Strong Bround Plants, 7/6 each.

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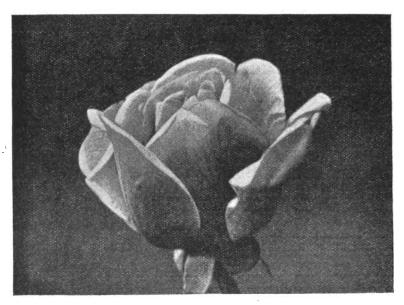
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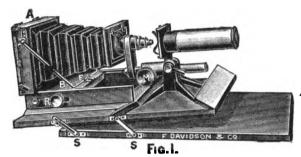


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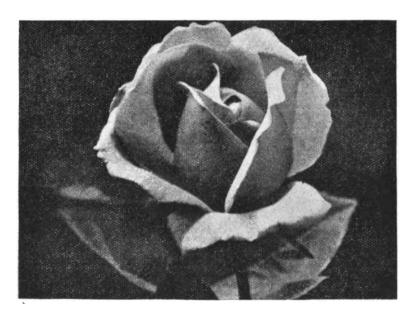
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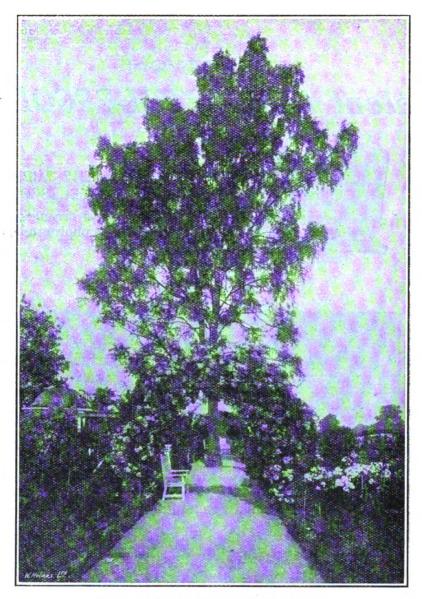


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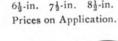
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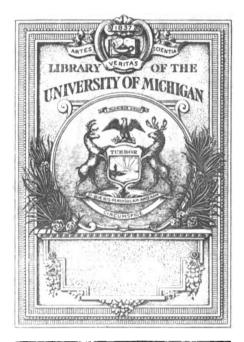
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